Dedifferentiated liposarcomas: evaluation of the prognostic and therapeutic factors in the elderly patient
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BMC Geriatrics 2010, 10(Suppl 1):A1

Background: Liposarcomas (LPS) are rare tumors accounting approximately for 19% of adult soft-tissue tumors [1]. The most recent classification of the WHO divides liposarcomas into 3 main clinicopathological and genetic subtypes: myxoid/round cells liposarcoma, well differentiated/ dedifferentiated liposarcoma and pleomorphic liposarcoma [2]. The importance of a total macroscopical resection to perform an oncologically correct operation is well known, so that it is often necessary to remove one or more adjoining organs with the purpose of reducing the risk of local secondary recurrences [3].

Materials and methods: We present the case of an 88-year-old woman with a large abdominal swelling. The TC of the abdomen shows the spleen moved upward (Figure 1). The left hemiabdomen is filled by an expansive formation almost 20 cm wide in diameter, made partly of a solid component and partly cystic-like. The pancreas is totally against the gallbladder. It does not seem possible to remove the back wall of the spleen from the swelling. (Figure 2).

We decide to perform surgery. The neoplasia is in continuity with the tail of the pancreas, so a distal pancreasectomy and splenectomy is performed. Definitive histological examination: dedifferentiated liposarcoma of high degree.

Results: After surgical resection of the primitive liposarcoma, factors determining the probability of recurrence and survival are: histological type, the impossibility to perform a complete resection, the removal of adjoining organs and the advanced age [4].

Conclusions: In retroperitoneal and abdominal lesions surgical treatment remains the most important therapy because of the evident lack of benefit of chemotherapy and the impossibility to administer doses suitable of radiation without serious damage to the healthy tissues. Studies are in progress for the revaluation of intraoperative radiotherapy (IORT) and of preoperative chemotherapy.

References
A2
Laparoscopic splenectomy in an elderly patient with splenic limphoma and splenomegaly
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2Department of Legal Medicin, Padova University, Italy
BMC Geriatrics 2010, 10(Suppl 1):A2

Background: Lymphomas represent a group of complex neoplastic diseases, characterized by hyperplasia and colonization of neoplastic lymphoid cells (T or B).

The aim of this study was to evaluate the result of laparoscopic surgery for the treatment of a splenic limphoma with splenomegaly in an elderly patient.

Materials and methods: Patient of 69 years, lipothymia and anemia, Hb 11,2 gr/dl, leukocytis 7780/dl (neutrophilis 21,4%, lymphocytis 68,9%) PLTs 81000/dl, VES 34 mm/h (n.v. 2-28).

Abdomen ultrasonography: spleen increased in volume (bipolar diameter 21,8 cm), bright liver. TC abdomen: spleen increased of volume, with inferior pole in Douglas.

Medullar biopsy: NH limphoma B-cell.

Laparoscopy with open technique. Section of gastric breves vessels, closure of splenic artery. Section of freno-colic and freno-lienal ligaments, section of parietal peritoneum near the spleen.

Section of splenic vessels on the inferior pole and section of the grande omento. Section of splenic vein with vascular EndoGia. Legature with titanium clips and section of splenic artery. Lymph-nodes of splenic ilio are removed en-bloc with the spleen. Liver biopsy. Ombelicus-pubic laparotomy to take the specimen.

Results: There were no intra- and post-operative complications and the patient resumed oral food intake on the 8th day. The definitive histological exam showed: spleen of abnormal size (diameters cm. 30 x 24 x 9, weight gr 2063), 12 lymph-nodes. NH B-cell limphoma, mantle cell (liver, splenic, lymphohodal localization). (Figure 1)

Conclusions: Laparoscopic surgery in elderly patients reduces post-operative pain, length of ileum and cardiopulmonary post-operative deficit [1-3]. In laparoscopic surgery the post-operative immune response is less reduced compared to open surgery, because of minor surgical stress and because fewer blood transfusions are required, above all in patients with limphoma who have to undergo a splenectomy with a higher risk of post-operative infections (Neisseria Meningiditis, Streptococcus Pneumoniae) [2-4].

In haemotological disease, laparaparoscopic surgery is also very useful in order to have a diagnosis, with less post-operative complication than open surgery and, predominantly in very big size spleens, reduce the probability of spleen trauma during operation [3,4].

References

A3
The role of sentinel node biopsy (SNB) in elderly breast cancer patients
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BMC Geriatrics 2010, 10(Suppl 1):A3

Background: Aged patients suffering from breast cancer are often “undertreated” because of their presumed shorter life expectancy, increasing comorbidty, and favorable tumor biology.

The Consensus Conference Panel of Philadelphia recommends SNB in patients with breast tumours ≤3 cm, although some authors have reported that this technique is reliable also in elderly patients with larger tumors.

The aim of this study was to assess the safety of the procedure as well as the rate of axillary recurrences after SNB in a series of old population.

Materials and methods: Between June 2007 and March 2009, we observed 122 female patients over 70 years old (range 70-85 years; mean age 75.6 years) with breast cancer in the geriatric population, in the context of a comprehensive geriatric assessment (CGA) was administered before and after surgery to assess the functional status as well as comorbidity and quality of life.

Results: After CGA and anaesthesiologic examination, a total of 108 (88.5%) of 122 patients were candidates for surgery, but 14 patients refused it. So 96 patients (89%) were operated on.

Breast-conserving surgery was performed in 60 (62.5%) of the 96 patients, while a radical mastectomy was performed in 36 (37%) patients.

A total of 77 (80.2%) of 96 patients underwent SNB; 30 (31%) had positive SNB (N+) and underwent axillary lymphadenectomy. In the remaining 47 patients (49%), SNB was negative (N0) for metastasis. At present, no axillary recurrence was observed in the group of sentinel node negative patients.

Discussion: Surgery is still the treatment of choice for primary breast cancer in the geriatric population, in the context of a...
multidisciplinary approach which needs to be adapted to the patient’s health status.

The principles concerning geriatric evaluation in elderly cancer patients before treatment, (CGA) establish the necessity of some form of assessment for all patients aged 70 and older.

The recent trend to substitute SNB can also be called into question, particularly in patients with a clinically negative axilla. There are few reports on the clinical recurrence rate in patients treated with SNB due to the short follow-up. Our study data suggest that SNB, when indicated, gives information about axillary staging, and spares patients aged ≥70 years unnecessary axillary lymph node dissection.

Reference

A4 Prosthetic repair of left diaphragmatic defect in an elderly patient: a rare case report
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BMC Geriatrics 2010, 10(Suppl 1):A4

Background: Partial or complete agenesis of the hemidiaphragm is a rare congenital malformation whose embryological basis is unknown. Late presentation is extremely rare and older patients are asymptomatic for a long time without developing ventilator insufficiency, because of the associated lung hypoplasia. Thus, only 7 cases of hemidiaphragmatic agenesis have been reported in adult patients.

Materials and methods: A 71-year-old man came to our Surgical Unit with features of dyspepsia, severe constipation and occasional but increasing episodes of incomplete bowel obstruction accompanied by abdominal distension and pain. Standard chest X-rays showed intestinal gas associated with a reduced diminished pulmonary volume in the left hemithorax (Figure 1A). Contrast medium X-ray of the upper gastrointestinal tract and enema documented the herniation of the stomach and the colon into the thoracic cavity (Figure 1B).

Results: Surgical treatment was carried out through a left subcostal laparotomy extended on the right side. The stomach, transverse colon, splenic flexure, spleen and part of the small bowel were found in the left thoracic cavity. Repair was performed with a 2-mm-tick expanded polytetrafluoroethylene soft tissue patch (Gore-tex®) that was circumferentially anchored tension free to the ribs, intercostals muscles and endothoracic fascia (Figure 1C). Postoperative chest X-rays showed good placement of the new diaphragmatic dome and the fundic air bubble in its correct position (Figure 1D). No early major or late complications were observed, and no recurrence was found at 34 months' follow-up.

Conclusions: The main questions relating to the management of a large diaphragmatic defect, such as agenesis, concern when and how to operate. We employed an e-PTFE patch, which is currently used for repairing other types of wall defect. This microporous mesh possessed good biocompatibility and produces a low inflammatory and fibrous reaction with a peripheral and interstitial arrangement of collagen fibers that allows the formation of a smooth surface. This surface is able to support a continuous layer of mesothelial cells on the peritoneal surface. This mesh seems to be an adequate and satisfactory diaphragmatic substitute, which can easily be used to repair large diaphragmatic defects, ensuring the best anatomical and physiological conditions possible with only a low risk of recurrence.
A5
Prognostic value of PCR, IL-6 and IL-10 serum levels in determining postoperative complications after geriatric surgery in diabetic patients
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BMC Geriatrics 2010, 10(Suppl 1):A5

Background: The onset of postoperative septic complications has been associated to serum levels of interleukin (IL) IL-6 and IL-10. [1,2]. We have extrapolated a diabetic group from a previous study to evaluate pre and postoperative profiles of some inflammatory markers (IL-6, IL-10 and CRP). We related the data obtained to the onset of postoperative complications. Diabetic patients have been selected because of their high rate of post-operative complications, especially surgical wound infection.

Materials and methods: We evaluated 15 patients, 6 males and 9 females, aged ≥ 70 (range 70-83). The preoperative criterium for inclusion was non urgent major abdominal surgery and a diabetes diagnosis, the exclusion criteria were: urgent abdominal surgery, therapy with steroid and/or immunosuppressor drugs during the 30 days before admission. For each patient we collected three peripheral venous blood samples, at preoperative time 0 (t0), and then at first (t1) and seventh (t2) postoperative day. Cytokine evaluation was obtained by the ELISA method with the “sandwich” technique. Among the latter we considered: surgical wound infection; urinary tract infection; respiratory infection/respiratory failure; SIRS and/or sepsis; anastomotic leakage; peritonitis.

Results: We observed 4 complications corresponding to 26.6% of all evaluated patients (Table 1).

Table 1 (abstract A5)

<table>
<thead>
<tr>
<th>POSTOPERATIVE COMPLICATIONS</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anastomotic leakage</td>
<td>1</td>
</tr>
<tr>
<td>Respiratory failure</td>
<td>1</td>
</tr>
<tr>
<td>Urinary tract infection</td>
<td>1</td>
</tr>
<tr>
<td>Respiratory infection</td>
<td>1</td>
</tr>
</tbody>
</table>

All subjects at (t1) showed an elevation of IL-6 levels, more consistent in the complicated ones (140.25 ± 100.89 pg/ml vs 91.54 ± 31.75 pg/ml) (Figure 1). IL-1 showed lower basic levels (t0) in complicated patients (14.54 ± 12.64 pg/ml vs 12 ± 10.70 pg/ml) and also in (t1) (26.36 ± 31.43 pg/ml vs 14.75 ± 7.41 pg/ml) (Figure 2). The CRP values didn’t differ at any time between the two groups (Figure 3).

Conclusions: In the group of elderly diabetic patients observed, so as in the general population, according to published data [1], IL-6 and IL-10 may be referred as prognostic markers with regard to postoperative complication. It would be moreover useful to identify a cut-off value to select the subjects with a higher postoperative risk.

References

A6
The extraperitoneal prosthetic repair of abdominal wall defects in the elderly
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BMC Geriatrics 2010, 10(Suppl 1):A6

Background: One of the most debated topics in the surgery of the abdominal wall hernias is the type and location of the prosthesis and even the employment of prosthetic materials for some authors is an object of discussion [1,2]. The aim of this work is to present the experience of a specialized center in abdominal wall surgery, showing the
results of open extraperitoneal prosthetic repair of the abdominal wall defects in the elderly.

**Materials and methods:** We retrospectively analyzed the 75 patients >65 years old admitted to our Center with a diagnosis of Incisional, Epigastric, Umbilical, Lumbar, and Spigelian hernia between January 1994 and January 2009. They were 38 males and 37 females. The diagnosis was: umbilical hernias in 6 patients, epigastric hernias in 9 patients, Spigelian hernias in 4 patients and incisional hernias in 57 patients. The comorbidities and the dimension of the defects are summarised in Figure 1 Table 1. In 42 patients we used a double-layered polipropilene mesh, in 27 a simple plug and in 4 cases a mono-layered polipropilene mesh and in 2 cases a dual-mesh. In 37 cases the mesh was placed in pre-peritoneal position, in 37 in premuscolar and in 2 cases in intraperitoneal. In 53 cases the surgical procedure was completed under local anaesthesia, in 37 in premuscolar and in 2 cases under spinal anaesthesia.

**Results:** We observed in group 6 under local anaesthesia intraoperative minor complications. Four patients referred little intraoperative pain and one medium pain. In 33 cases the patient was discharged within 24 hours (Day Surgery). We observed no postoperative complications. In our follow-up (12-180 months) we found 3 recurrences among the incisional hernias (5.2%), Figures 2 and 3.

**Conclusions:** The open extraperitoneal approach by using a polipropilene double layer mesh is in our experience the preferred technique; it almost always permits surgical repair to be carried out under local anaesthesia very often in Day Surgery [3], giving excellent long-term results and minor complications.

**References**

A7 Perspectives of computer assisted resection planning and navigation for hepatic resections in the elderly

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**Background:** Recent advances in image-based computer assistance in the last ten years allow computerized preoperative simulations, giving a lot of advantages in the preoperative surgical planning of resections. Preoperative simulation represents the prerequisite for navigated liver surgery. The aim of this study is to describe elementary technical aspects of a navigated approach to liver resections showing the advantages of navigation system especially in the elderly.

**Materials and methods:** The preliminary condition in order to realize the navigation system in liver surgery is the simulation software previously
developed. In fact, after the first step consisting in the planning of the surgical resection surface and direction (Figure 1) and the second step of the registration of the surgical planning directly on patient’s anatomy by using an infrared optical localization-device positioned on a US-probe (Figure 2), there is the third phase performing the 3D-simulated liver resection directly on the patient driven by the navigation system. This information was in some resections also transferred to the liver surface using an image-guided stereotactically navigated ultrasound dissector (CUSA) (Figure 3).

**Results:** The main advantages shown in old patients were: the possibility to extend major liver resections while calculating exactly the rest-volume of the liver, to give a more precise localization of vessels and biliary structures, to allow the recognition of anatomical variants, to drive multiple resection sparing as more parenchyma as possible avoiding re-resection. The navigation system seems to be very useful and applicable in old patients, reducing the risk of liver failure [1] and allowing us to also operate on a tumour no more to be localized after neoadjuvant chemotherapy [2].

**Conclusions:** The navigation system allowed us to exactly reproduce in the operatory theatre, on the patient, the previously computer-planned operation. In selected cases, this information may have a considerable influence on operative planning [3], especially with regard to the extent of resection or the need for vascular reconstruction. This seems to be particularly important in extended left hepatectomies or in repeat hepatectomy when intrahepatic vascular anatomy may be altered.

**References**

Results: Ultrastructural muscular lesions were present in a mix of combinations in 94% (31/33) of the patients affected by HH; they showed at least one or more than one of the main types of electron microscope alterations. These findings were present in each of two pillar samples: types I, II, III, and IV muscular changes have been documented in 45%, 39%, 51%, and 75% of the cases, respectively.

Conclusions: We theorized that the changes of the hiatus may affect the ultrastructure of the sarcolemmal–plasmic components as well as the extracellular matrix of the muscle. This hypothesis was sustained by the observation of high frequency relapses of hiatus hernia after traditional surgical intervention in spite of the lack of an objective and instrumental evidence of any alteration affecting the muscle–connective components of the diaphragm in such type of patients. We could deduce that the diaphragmatic crural alterations could influence the outcome of hiatal hernia repair as it occurs for inguinal, ventral, and/or incisional hernias. This concept is supported by the fact that the ultrastructural changes were found only in the muscular tissue, and by the fact that the incidence of severe muscular lesions, as types IV and III, was very high (75% and 51%, respectively) in our patients. The use of a prosthetic reinforced hiato plasties seems to significantly reduce the risk of postoperative disruption of hiatal repair. However, the use of mesh at the hiatus may result in the additional risk of erosion, migration of the mesh into the esophagus or stomach as well as the development of fibrotic strictures or adhesions in the hiatal area over the long term. Future randomized trials are needed to confirm that mesh repair is superior to simple crural closure.

Table 1 (abstract A8). Grading of the Electron Microscope Pillar Changes

<table>
<thead>
<tr>
<th>Grade</th>
<th>Ultrastructural findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Dilation of the intermyofibrillar spaces</td>
</tr>
<tr>
<td>II</td>
<td>Swelling of sarcotubular structures</td>
</tr>
<tr>
<td>III</td>
<td>Focal degeneration of myofibrils</td>
</tr>
<tr>
<td>IV</td>
<td>Extended disruption–degeneration of the muscle architecture</td>
</tr>
</tbody>
</table>

A8

Shedding some light on the use of mesh in gastroesophageal junction surgery

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BMC Geriatrics 2010, 10(Suppl 1):A8

Background: Postoperative complications such as failure or disruption of the crura repair and intrathoracic migration of the wrap are the most common anatomic reasons for the failure of Laparoscopic Nissen Fundoplication. The authors hypothesized that ultrastructural illness may be implicated in this recurrence. The aim of this study was to investigate the presence of changes at esophageal hiatal area in patients with and without HH and to shed some light on the use of mesh in this surgery.

Materials and methods: We enrolled 33 patients affected by simultaneous hiatal hernia and GERD (HH group) and 14 with cholelithiasis and one with a symptomatic cyst of the spleen (control group). All specimens from phrenoesophageal membrane and diaphragmatic crura were processed and analyzed by transmission electron microscopy. The grading of the identified ultrastructural muscular lesions ranged from a low severity degree (type 1) to a high severity degree (type 4), as detailed in Table 1.
The demographic changes taking place are to have a strong impact on the composition of the Italian population, in which the elderly bearers of chronic diseases are considerably increasing. The traditional model of care does not appear adequate to ensure the best results in terms of maintaining skills and quality of life and helps to make the overall system of care barely sustainable from an economic perspective. In literature new management models were proposed dedicated to the care of chronically, keeping as their main objective the welfare of the elderly patient, understood in terms of the maintenance of residual autonomy and the reduction of costs [3].

References

Table 2 (abstract A10). Factors associated with recurrence in patients ≥ 70 years

<table>
<thead>
<tr>
<th>Neoplastic recurrence + (%), Neoplastic recurrence - (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients: 9 (56%), 7 (44%)</td>
</tr>
<tr>
<td>Male/Female: 6 (65%), 3 (35%), 5 (70%), 2 (30%)</td>
</tr>
<tr>
<td>pTNM I: 1 (11%), 1 (11%), 7 (78%), 1 (14%), 3 (43%), 3 (43%)</td>
</tr>
<tr>
<td>pTNM II: 3 (33%), 3 (33%), 6 (33%)</td>
</tr>
<tr>
<td>pTNM III: Total gastrectomy 3 (33%), 3 (33%); Subtotal gastrectomy 5 (55%), 4 (45%), 4 (67%), 3 (33%)</td>
</tr>
<tr>
<td>Intestinal: 1 (11%), 8 (89%)</td>
</tr>
<tr>
<td>LNR &lt; 20%: 1 (11%), 8 (89%)</td>
</tr>
<tr>
<td>LNR ≥ 20%: 5 (70%), 2 (30%)</td>
</tr>
</tbody>
</table>

subtotal gastrectomy, Lauren diffuse adenocarcinoma and a LNR ≥ 20%. These factors can help the surgeon and the oncologist to identify, in a population of elderly gastrectomized patients, who needs a closer follow-up due to a higher risk of recurrence, in order to permit a more aggressive therapy.

Reference

**A10**

**Patterns of neoplastic recurrence in gastrectomized elderly patients**

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**BMC Geriatrics 2010, 10(Suppl 1):A10**

**Background:** The incidence of gastric cancer in elderly patients is increasing and the choice of treatment is controversial among physicians, oncologists and surgeons. In addition, about 2/3 of patients present a neoplastic recurrence after a curative intervention [1]. The aim of this study is the analysis of the factors which influence the risk of recurrence in elderly patients.

**Materials and methods:** All patients who received a gastrectomy for adenocarcinoma in our surgical department from January 1998 to December 2002 were admitted to the study. Inclusion criteria were: a) Curative resection (R0); b) no metastases before surgery; c) no other primitive neoplasms; d) consensus of the patient for a follow-up of 5 years. Recurrence was indicated as haematogenous, peritoneal or locoregional on the basis of the first site of metastases. Patients were divided into two groups by age: cut-off was considered 70 years old. **Results:** 48 patients were admitted to the study: 26 male and 22 female patients, with an average age of 61.9 years old (37 – 80). 16 patients were ≥ 70 years old.

During a 5-year follow-up we observed in the older group 9 recurrences (56%): in 44% cases there was a peritoneal recurrence, in 33% a haematogenous recurrence and in 23% of patients a locoregional disease. In patients < 70 years old we observed a peritoneal recurrence only in 5% of cases. (Table 1).

Factors correlated with a neoplastic recurrence in the older group were: pTNM III at diagnosis (78% vs 43%), subtotal gastrectomy (65% vs 56%), Lauren diffuse adenocarcinoma (45% vs 33%) and a Lymphonodal ratio (LNR) ≥ 20% (89% vs 30%) (Table 2).

**Conclusions:** In elderly patients we observed a neoplastic recurrence in 56% of cases: first site of disease was peritoneum (44%) then haematogenous recurrence (33%). In younger patients, instead, a locoregional recurrence was more frequent (62% vs 23%). Predictive factors of neoplastic recurrence in elderly patients were: pTNM III, subtotal gastrectomy, Lauren diffuse adenocarcinoma and a LNR ≥ 20%.

**A11**

**The treatment of peritoneal carcinomatosis in elderly patients**

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**BMC Geriatrics 2010, 10(Suppl 1):A11**

**Background:** Peritoneal carcinomatosis is a frequent evolution of gastrointestinal and gynecologic malignancy and it has been regarded as a lethal clinical entity. Treatment options for these patients have improved significantly in the past few years. Cytoreductive Surgery (CRS) plus Hyperthermic IntraPeritoneal Chemotherapy (HIPEC) is an aggressive and promising treatment for patients with peritoneal malignancies. Whether this type of major cancer surgery is feasible in elderly patients is an ongoing question.

**Materials and methods:** For this study we have only considered the patients with a minimal follow up of 18 months. For this reason we have evaluated 30 patients, 11 (36.6%) aged ≥ 65 years, submitted, in the period May 2004 –April 2008, to 33 CRS plus HIPEC. Criteria of patients’ eligibility were peritoneal carcinomatosis of different origins, T3-4 gastric cancer, ECOG performance status ≤ 2, no extra-abdominal extension and no evidence of bowel obstruction. For the intraoperative staging we have used the “Peritoneal Cancer Index” (PCI) [1] and to evaluate the entity of cytorreduction the “Completeness of Cytoreduction score” (CC score) [2] (Figure 1).

**Results:** Results of our experience are reported in Table 1.

**Conclusions:** The rationale of CRS plus HIPEC is based respectively on the removal of gross disease and on the eradication of microscopic residual disease. The peritoneal-plasma barrier retards the clearance of high molecular weight chemotherapy from the peritoneal cavity and allows a large exposure of small residual cancer nodules. Tissue penetration of the intraperitoneal chemotherapy is facilitated by moderate hyperthermia (41-42°C). This promising therapeutic approach is associated with significant morbidity and mortality and the surgical risk in elderly patients is even higher, since these people suffer from frequent comorbidities [3]. In our experience we have recorded, in elderly patients,
higher, but acceptable, morbidity (27.2% vs 18.1%) and mortality (18.1% vs 4.5%), probably correlated with their comorbidities (100% vs 36.8%), lower mean postoperative hospital stay (15.6 days vs 17.2) and a good 18-months overall survival (63.6%). We retain, on the basis of our experience and of the data of the literature [3], that age and advanced peritoneal malignancy should not preclude patients from the maximal surgical effort.

References

A12
Role of lymph nodal dissection for gastric cancer in the elderly
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BMC Geriatrics 2010, 10(Suppl 1):A12

Background: Surgeons are being increasingly asked to treat older patients with gastric cancer due to longer life expectancy. D2 lymph node dissection is considered a standard procedure [1]. However, there is no consensus on the extent of lymphadenectomy in the elderly [2]. The aim of this study was to investigate the safety and the efficacy of D2 lymph node dissection in patients aged 75 or over, compared to younger ones.

Materials and methods: Among 183 patients with gastric carcinoma treated from 1994 to 2006, 47 (25.7%) were over 75 years old. All patients received a curative resection. Data from clinical records were collected and analyzed with MedCalc™.

Results: Gender, stage and nodal involvement were similar between the groups. Total gastrectomy was executed more frequently in the younger group (46.3% vs 27.7%, p = 0.03), as well as D2 nodal dissection (33% vs 17%, p = 0.01). Peri-operative mortality rate was similar in the two groups (3.1% vs 2.4%; p = NS). Post-operative surgical morbidity rate wasn’t age-related, while medical complications were more frequent in the elder group (5% vs 14.5%, p = 0.05). Surgical and medical complications were not related to D2 lymphadenectomy in patients aged 75 or over, compared to younger ones.

Conclusions: Our experience shows that D2 Nodal Dissection improves survival not increasing morbidity and mortality and is a safe procedure in experienced hands. This advantage appears to be less relevant in the elder group than in the younger one. We may suppose that pre-existing comorbidities can influence the long-term outcome in elder patients. An accurate selection of patients is mandatory to achieve the best results.

Table 1 (abstract A11). characteristics of patients and results

<table>
<thead>
<tr>
<th></th>
<th>Pts</th>
<th>Procedures</th>
<th>Mean age (range)</th>
<th>Chronic comorbidities</th>
<th>Mean duration of surgery (min.)</th>
<th>Mean PCI</th>
<th>CC score</th>
<th>Mean postop. hospital stay (days)</th>
<th>Morbidity</th>
<th>Mortality</th>
<th>18 mths overall surv.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>30</td>
<td>33</td>
<td>58.3 (30-77)</td>
<td>18/30 (60%)</td>
<td>556.7</td>
<td>8.2</td>
<td>29 pts: 0 3pts: 1 1 pt with relapse: 2</td>
<td>17</td>
<td>21.2%</td>
<td>9%</td>
<td>66.6%</td>
</tr>
<tr>
<td>Pts aged &lt; 65 years</td>
<td>19</td>
<td>22</td>
<td>52.7 (30-63)</td>
<td>7/19 (36.8%)</td>
<td>551.3</td>
<td>8.1</td>
<td>19 pts: 0 2 pts: 1 1 pt with relapse: 2</td>
<td>17.2</td>
<td>18.1%</td>
<td>4.5%</td>
<td>68.4%</td>
</tr>
<tr>
<td>Pts aged &gt; 65 years</td>
<td>11</td>
<td>11</td>
<td>69.7 (65-77)</td>
<td>11/11 (100%)</td>
<td>567.5</td>
<td>8.2</td>
<td>10 pts: 0 1 pt: 1</td>
<td>15.6</td>
<td>27.2%</td>
<td>18.1%</td>
<td>63.6%</td>
</tr>
</tbody>
</table>
References


Background: The sentinel node biopsy in elderly women remains a controversial issue. Recent studies concluded that conservative breast surgery such as the sentinel node technique can be performed in elderly patients [1-3]. The technique is safe and without additional risk compared with the young, but there is a tendency to perform no or less extensive axillary surgery [4,5]. Some authors argue that in elderly patients with early breast cancer and clinically negative auxiliary lymph nodes, auxiliary dissection such as the sentinel node biopsy and postoperative radiotherapy may not be necessary because of reduced life expectancy [6] and the ability to predict which elderly patients may have low probability of lymph node metastasis may be spared the morbidity of lymph node evaluation [7]. The sentinel node biopsy in elderly patients is feasible and mortality data between older and younger do not show major differences when adjusted for associated pathologies [2]. The stage of disease and comorbidities must be considered for treatment of cancer in elderly patients.

The purpose of this study is to demonstrate the feasibility and safety of sentinel node biopsy in elderly patients.

Materials and methods: 40 patients with breast cancer underwent sentinel node biopsy. All patients underwent lymphoscintigraphy the day before surgery. 15 patients had passed the age of 70 and three the age of 80. Diabetes and heart disease were present in 7 patients.

Results: A total of 18 patients aged ≥70 years (median 75,91 years, range 70–82) with operable breast cancer who underwent sentinel node biopsy were included in the study. The sentinel node (SN) was identified in all the patients, with an identification rate of 100%. The sentinel node was localized in 37 patients (92.5%). All patients underwent breast-conserving surgery.

The sentinel node was positive for metastasis in 3/18 (16.6%) patients who, after intraoperative diagnosis, underwent complete auxiliary dissection in the same surgical procedure. Definitive histological examination showed that two patients had only the sentinel node invaded. No complications were found in axillary lymph node recurrence either.

Conclusion: The results obtained are similar in patients above and below 70 years of age. The indication for surgical treatment, conservative or demolition of the breast, is independent of age of the patient. The sentinel node biopsy is feasible and safe in elderly patients with an individualized approach and can reliably predict the state of the axilla and avoids unnecessary treatment of healthy lymph nodes excision and reduces hospitalization costs.

References

the first group receiving mechanical bowel preparation before elective colorectal surgery the second with no preparation.

**Materials and methods:** In our division, since 2002 elective colon surgery is routinely performed by laparoscopy. Until September 2008 no preparation was done; from September 2008 a preparation based on polyethylene glycol was administered to all patients.

The study included 61 patients, aged above 60 who had undergone elective laparoscopic colorectal surgery. They were subdivided into two groups:

1. **Group 1.** N.33 patients average age 65 (between 60 and 89) were prepared before surgery; 7 patients underwent right hemicolectomy, 16 left hemicolectomy-sigmoidectomy and 10 anterior resection of the rectum.
2. **Group 2.** N.28 patients average age 64 (between 60 and 87) were not prepared before surgery; 7 patients underwent right hemicolectomy, 13 left hemicolectomy-sigmoidectomy and 8 anterior resection of the rectum.

**Results:** Group 1. Complications were described in 2 cases: one case of anastomotic dehiscence after left hemicolectomy resolved with conservative treatment; one case of anastomotic dehiscence in anterior resection of the rectum treated by laparoscopic drainage and ileostomy.

Group 2. Complications were described in 7 cases: 2 cases of surgical wound infection, 4 cases of anastomotic fistulas two treated with conservative treatment, two treated with laparoscopic drainage and ileostomy, one case of abdominal sepsis, which caused the death of the patient.

The differences between the two groups in the number of complications were not statistically significant but still show a trend toward fewer complications in Group 1.

**Conclusions:** In our division, after the experience of colorectal surgery the second with no preparation.

- 1) in non-prepared patient an anastomotic fistula tends to be a more serious complication due to the fecal leakage in the abdominal cavity;
- 2) interventions in laparoscopy imply performing mechanical anastomoses that are easily carried out in prepared patients;
- 3) in our division the protective ileostomy is not performed routinely; in cases of anastomotic dehiscence in an unprepared patient you have a high risk of stercoraceous peritonitis.

**A16**

**A rare case of extraovarian primary peritoneal carcinoma in a 72 year-old woman**

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**Background:** Extraovarian Primary Peritoneal Carcinoma (EOPPC) was first described by Swerdlow in 1959 [1]. Basically, EOPPC is a malignancy that spreads widely inside the peritoneal cavity involving mostly the omentum with minimal or no ovarian involvement. Most of the EOPPC cases reported have been of serous histology; histopathological, immunohistochemical, and clinical similarities have been observed between EOPPC and Epithelial Ovarian Cancer (EOC).

**Materials and methods:** In June 2007 a 72 year-old woman was referred to our Unit for recurrent abdominal pain, constipation, loss of weight (BMI 17.5), serious asthenia and fever. Laboratory biochemistry showed hypocromic microcitc anemia, leucocytosis, increased plasma levels of flogistic markers and serious increase of CA 125 marker (373.2 U/ml – normal range 0-35 U/ml). Abdominal US scan confirmed by CT scan (Figure 1), revealed a high vascularised solid mass close to the peritoneum (maximum diameter 10-12 cm), ascites among intestinal handles and into Douglas pouch. The colonoscopy did not show any neoplasm. A solid mass not separable from omentum, irregular morphology was found by median laparotomy (Figure 2); no primary tumor was found anywhere else in the abdomen.

**Results:** The morphological features such as serous papillary carcinoma and the presence of many psammoma bodies and the immunohistochemical highly positive for CA 125 (Figure 3) have determined the diagnosis of EOPPC.

This patient received a first-line chemotherapeutic treatment with paclitaxel (135mg/m²/24 hr) and cisplatin (75 mg/m²) in combination for six cycles. No evidence of recurrence was found at the 2-year follow-up.

**Conclusions:** As the EOPPC is mullerian malignancy as the epithelial layer of ovary and the peritoneum share a common embryological origin and it

**Figure 1 (abstract A16)**

**Figure 2 (abstract A16)**
Conclusions: This study demonstrates that surgery should not be denied to elderly patients with colorectal cancer; age is not a limitation for surgery, tumour stage and co-morbidity define the surgical treatment [2]. The morbidity and mortality figures for elective procedures are not different from the younger age population and favourable long-term outcome can be achieved by resectional surgery [3]. Diagnostic methods, rate of curative operations performed, staging, morbidity rate and 5-year survival rate are similar to younger patients. Finally the behaviour of colorectal carcinoma does not change with age and the age has no effect on the long-term survival of elderly patients.

References

A18
A diagnostic score for ischemic colitis in the elderly
M Mosele1,*, E M Inelmen1, F Cardin1, P De Carlo1, S Fratta1, E Perissinotto2, C Terranova1, E Manzato1
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Background: Ischemic colitis (IC) is the most common form of ischemic injury of the gastrointestinal tract and mortality is still high [1]. Although prompt suspicion and exact diagnosis, especially in elderly people, are highly critical, there have been few reports on risk factors for presumed IC compared with the general elderly population [2]. We performed this study to create a diagnostic score for IC in the elderly.

Materials and methods: A retrospective study was undertaken on 78 patients with IC admitted to Padova General Hospital between 2003 and 2008. Only patients with biopsy-proven IC were considered. Seventy eight control subjects were randomly selected from those seen at our units for acute geriatric disease during the same interval. IC risk factors resulted significative by univariate analysis, were put in a stepwise logistic regression model. In order to evaluate the adequacy of the model in the correct classification of the patients on the basis of their clinical condition, the Hosmer and Lemeshow test (Goodness-of-Fit Test) was applied. The score for every single variable introduced in the model was also evaluated the global score for every subject put in the study was calculated. Finally in order to identify the best cut off of the global score to discriminate between "positive" and "negative" subjects in the IC diagnosis, a ROC analysis was performed. The area under the curve (AUC) was used as an accuracy index of the model.

Results: The risk factors for IC identified at univariate analysis were analyzed in a stepwise regression logistic model and 5 of them confirmed their independent significance as risk factors (Table 1). For every predictive variable for IC, regression coefficient and the corresponding score were calculated and showed a good diagnostic value.

Table 1 (abstract A18). Predictors of ischemic colitis, regression coefficient and single calculated score

<table>
<thead>
<tr>
<th>Predictors of IC</th>
<th>β*</th>
<th>P</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hematochezia</td>
<td>4.04</td>
<td>&lt;0.0001</td>
<td>0.48</td>
</tr>
<tr>
<td>Vasculopathy</td>
<td>2.23</td>
<td>0.0002</td>
<td>0.24</td>
</tr>
<tr>
<td>Cancer</td>
<td>1.77</td>
<td>0.0018</td>
<td>0.18</td>
</tr>
<tr>
<td>Creatinine</td>
<td>1.54</td>
<td>0.0016</td>
<td>0.16</td>
</tr>
<tr>
<td>Heart disease</td>
<td>1.1</td>
<td>0.0251</td>
<td>0.12</td>
</tr>
</tbody>
</table>

* regression coefficient
considered (Table 1). ROC analysis, finally, identified as cut-off point the value of 0.72 for the global score (Specificity = 90.3; Sensitivity = 74.3) AUC resulted 0.834, index of a moderate accuracy of the model.

**Conclusions:** Despite the small number of patients included in this study, our diagnostic model of IC in the elderly shows a moderate accuracy. The discriminating cut-off point on the possible diagnosis of IC, even if endowed with minor sensitivity and specificity compared to instrumental examinations, is easily and rapidly applicable to every single patient, particularly to the elderly.

**Table 1 (abstract A20). Clinical signs of prolidase deficiency**

<table>
<thead>
<tr>
<th>Mental retardation</th>
<th>Narrowed eyes</th>
<th>Recurrent infections</th>
<th>Splenomegaly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saddle nose</td>
<td>Hypoplasia of the jaws</td>
<td>Talipes equines</td>
<td>Protuberant abdomen</td>
</tr>
<tr>
<td>Photosensitivity</td>
<td>Dry crusted lesions</td>
<td>Osteoporosis</td>
<td></td>
</tr>
<tr>
<td>Purpura</td>
<td>Dry fissured erythematous palms and soles</td>
<td>Corneal opacity</td>
<td></td>
</tr>
</tbody>
</table>

**References**

**A19**

**Elderly surgical “not transfusable” patients**

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**BMC Geriatrics 2010, 10(Suppl 1):A19**

**Background:** Non transfusable patients’ care presents complex ethical, legal and medical problems when their refusal is related to a religious belief. This kind of patient may need both elective and emergency treatment that they generally accept, with the exception of blood transfusion.

**Materials and methods:** 25 patients were evaluated in our Institution (14 males and 11 females) for curative surgical operations: 8 gallbladders, 5 ventral median incisional hernias, 7 sigmoid diverticulosis, 5 inguinal hernias. Different intraoperative techniques were analyzed: normovolemic acute hemodilution, use of hemo-recovery device and anaesthesia with controlled hypothermia and hypotension. Patients were monitored for 8 – 10 days.

**Results:** Surgical operation was regular and free of complications in all cases. One patient, treated with hypotensive anaesthesia, developed transient hypercapnia immediately corrected by an adequate pulmonary ventilation; 2 patients operated in controlled hypothermia developed a transient hypertensive peak, which was pharmacologically controlled. Postoperative hospital stay was regular and free of complications for all patients, which were discharged after 8-10 days without any evidence of bleeding.

**Conclusions:** The most important complication in “non transfusable” patients’ operations is bleeding and the impossibility to treat it with blood transfusions. In these conditions, prudent conduct becomes extremely important as well as careful operative and postoperative management with the possibility of particular anaesthetic protocol, the need of close cooperation between surgeon and anaesthesist and valid legal support.

**A20**

**Sequential and combined treatment of prolidase deficiency leg ulcers**

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**BMC Geriatrics 2010, 10(Suppl 1):A20**

**Background:** The Authors report a case of chronic cutaneous lesions in a patient affected by prolidase deficiency, a rare disorder inherited through an autosomal recessive gene (50 cases reported). The enzyme prolidase is widely distributed throughout the body and it is important in the recycling of proline and hydroxyproline. Among the clinical presentations, the most striking manifestation is the skin fragility with leg ulceration (see Table 1).

The deficiency of the enzyme prolidase is responsible for massive loss of proline in the urine which is estimated to be as high as 3 g/die. The diagnosis is ascertained by iminopeptiduria greater than 5 mmol/24h. A characteristic feature is absolute resistance to all forms of treatment including rejection of skin grafts.

**Materials and methods:** A 42 year-old woman affected by Prolidase Deficiency was observed because of the recurrence of leg ulcers (Figure 1). All clinical findings and laboratory data (iminopeptiduria > 6 mmol/die) lead to a diagnosis. Administration of corticosteroids and of ointments were performed with no results. In 1998 an autologous skin transplant with the rejection of a skin graft. In 2007 administration of high dose corticosteroids with a partial regression of symptomatology. In October 2008 clinical feature suggested to cover all the lesion with holoagus skin graft which was then partially rejected. In January 2009 and all lesions were covered and during follow-up the use of autologous PLT-gel for 10 weeks was proposed. From the third application clinical data showed good results and after the tenth application all the lesions were treated with advanced devices. No signs of infection were present. The patient is now going into complete remission of skin lesions.

**Discussion:** Use of platelet gel is commonly accepted for the treatment of leg ulcers because it is rich in growth factors. Their presence could be a key to block the onset of a flogistic reaction to proline and hydroxyproline account in derma. All clinical investigations shows that after the PLT gel application there is not a rejection to homologous skin implants but an improvement in symptomatology and inability.

**References**

**A21**

**Retrospective assessment of inguinal hernia repair in elderly patients**

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Department of Surgery “F. Durante”, Sapienza University, Roma, 00161, Italy

**BMC Geriatrics 2010, 10(Suppl 1):A21**

**Background:** In the last ten years Day Surgery has significantly evolved, due to improvements in surgery and anaesthesia, and the need of reducing long term admission costs [1]. However, is Day Surgery suitable for elderly patients? The aim of this paper is to assess the risk of over 70 year-old outpatients who underwent inguinal hernia repair, and suggest an adequate preoperative pathway.

**Materials and methods:** The study analyzes collected data of a consecutive series of 211 patients submitted to groin hernia repair with open technique, under local anaesthesia. Inclusion criteria were: primary groin hernia, BMI < 30 and good home support. All patients were preoperatively assessed on their ASA grade.

Then they were retrospectively divided in two groups, over 70 years-old and younger. As primary outcomes mortality, postoperative main complications and unanticipated admission are considered. Secondary outcomes were postoperative pain, nausea and vomiting, wound infection, urinary retention and light bleeding.

**Results:** No patients reported severe complications after same day hernia repair. In the A group (62 male patients) no mortality or any other major complications were observed, despite many patients (23 – 37%) having cardiac and pulmonary chronic diseases and were classified ASA III.
Figure 1 (abstract A20). PD skin lesions before and after combined treatment.
preoperatively. Only one patient had urinary retention which required catheterization. However, it didn’t affect the same day discharge. In the B group (147 males and 2 females) two patients had an unanticipated admission. A femoral nerve block after incorrect local anaesthesia was observed in one patient, and a further case complained of severe postoperative pain with ambulation inability. Furthermore, three patients contacted their own surgeon with minor concerns. Lastly, elderly patients referred less pain than younger ones.

**Conclusions:** Day Surgery in patients with inguinal hernia revealed to be safe with a very low mortality risk, even at a late age, if a careful preoperative assessment has been performed [2]. Elderly patients’ preoperative pathway needs especially to assess cardiovascular and respiratory conditions. Also other diseases as diabetes, hypertension, peripheral vascular diseases and smoking need to be identified preoperatively. On the other hand, ASA III class, per se, does not represent a predictive factor for unanticipated admission, and is a less relevant factor than a careful preoperative assessment [3]. In conclusion there is no good reason to deny day surgery admission, on principle, to elderly patients undergoing inguinal hernia repair.

**References**

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**A22**

**Primary breast lymphoma and MRI**

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**Background:** Primary lymphomas of the breast (PBNHL) are uncommon and exclusive to the elderly. Magnetic resonance imaging (MRI) features of these malignancies can be relevant in establishing the extent of the disease and planning the appropriate therapeutic strategy, usually represented by chemo-and radiotherapy, rather than surgery. The purpose of this study is to assess MRI features of PBNHL.

**Materials and methods:** MRI examination performed on four patients with known PBNHL were retrospectively evaluated. Lesions were analysed for both morphology and kinetics.

**Results:** The mean MRI maximum diameter was 46mm (range 12-69). Three lesions showed a mass-like enhancement; one lesion showed a non mass-like enhancement. For the mass-like lesions kinetic curve assessment of initial rise showed slow enhancement in one lesion, rapid enhancement in two lesions, and medium enhancement in one lesion. Assessment of delayed enhancement showed plateau in 3 lesions and washout in one lesion.

**Conclusions:** MRI features of primary breast lymphomas in this study cohort suggest that the occurrence of a PBNHL should be considered in the presence of large enhancing lesions of the breast, especially if associated whit skin thickening. MRI may also have an important role in the assessment of response to therapy and diagnosis of recurrence.

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**A23**

**Hepato-biliopancreatic surgery in the elderly**

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**Background:** The HPB district tumour includes a high incidence between the 6th and the 8th decade of life. ISTAT information from the 1st January 2009 confirm that people over the age of 65 represent 20.1% of the population.

In Calabria they represent 18.7% of the population, according to the national tendency.

**Materials and methods:** From November 2007 to October 2009, 185 HPB patients from our Institute were observed and divided as follows: 39 for pancreatic tumours, 21 for HCC; 39 for neoplasm of the CBD, 41 for liver MTS; 45 for benign liver pathology.

**Results:** Operative mortality, disease – free survival and overall survival are very similar to the deducible information of the whole survey and they seem to be influenced by tactics and surgical technique. As the elderly can present comorbidity, cognitive defects and less life expectancy, appropriate therapeutic options require a significant selection by the candidate for major resective surgery.

**Conclusions:** Our information indicates that seniority is not an aggravating risk in terms of outcome, not only by the significant patient selection but also by the surgeon experience and it doesn’t condition major surgical options.

The HPB resective surgery, in selected elderly patients, can be done maintaining an acceptable morbidity and an appropriate survival level in terms of life.

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**A24**

**Laparoscopic diverting colostomy in the therapeutic management of large bowel obstructions in neoplastic elderly patients**

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**BMC Geriatrics 2010, 10(Suppl 1):A24**

**Background:** Laparoscopic approach in patients with unresectable colorectal cancer avoids major laparotomy; we would like to estimate the feasibility, safety, and efficacy of the laparoscopic approach in elderly patients with obstruction of the large bowel.

**Materials and methods:** Our personal experience includes 12 patients (8 men; 4 women); average age 75 years (range: 70-86). All patients had a history of bowel obstruction or of bleeding for sigmoid, rectal or anal cancer; the patients underwent laparoscopic stoma creation. The purpose of this study is to assess MRI features of PBNHL.

**Materials and methods:** MRI examination performed on four patients with known PBNHL were retrospectively evaluated. Lesions were analysed for both morphology and kinetics.

**Results:** The mean MRI maximum diameter was 46mm (range 12-69). Three lesions showed a mass-like enhancement; one lesion showed a non mass-like enhancement. For the mass-like lesions kinetic curve assessment of initial rise showed slow enhancement in one lesion, rapid enhancement in two lesions, and medium enhancement in one lesion. Assessment of delayed enhancement showed plateau in 3 lesions and washout in one lesion.

**Conclusions:** MRI features of primary breast lymphomas in this study cohort suggest that the occurrence of a PBNHL should be considered in the presence of large enhancing lesions of the breast, especially if associated whit skin thickening. MRI may also have an important role in the assessment of response to therapy and diagnosis of recurrence.

**References**

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**A25**

**Pancreatic surgery in elderly patients**

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**BMC Geriatrics 2010, 10(Suppl 1):A25**

**Background:** Elderly pts are at a greater risk of post-operative complications than younger ones, due to several pre-existing co-morbidities.
Nevertheless, in recent years, improvements in surgical techniques and mainly in anaesthesiology have allowed successful treatments also in elderly people.

Materials and methods: 122 pts (M: 65; F: 57), over 70 years of age, affected with pancreatic pathologies, were considered. Pre-existing comorbidities were mainly represented by: hypertension, chronic obstructive pulmonary disease, diabetes mellitus, coronary artery disease, cardiac valve disease.

Percutaneous and or endoscopic US-guided biopsy of the pancreas for histopathologic demonstration of cancer before surgery or chemotherapy was always performed. 88 pts suffered from cancer of the pancreas; 6 from benign tumors of the pancreas; 26 from pancreatitis; 1 from cancer of the transverse colon infiltrating the pancreas and the stomach and 1 from cancer of the stomach infiltrating the head of the pancreas.

Results: 92 pts underwent surgery and were thus divided: 67 for cancer, 7 for benign pathologies and 18 for pancreatitis; 53 pts underwent pancreatic resections and were thus divided: 1 total pancreatectomy, 10 distal splenopancreatectomies, 19 pancreaticoduodenectomies, 23 partial resections. 24 pts underwent surgical palliation for unresectable cancer, conditioning obstructive jaundice and or duodenal obstruction. 3 pts underwent intraoperative biopsy. 25 pts with obstructive jaundice, underwent ERCP, with positioning of endo-luminal stent before surgery or before chemotherapy (if resective surgery was contraindicated). After resective surgery of the pancreas, mean post-operative ICU stay and mean postoperative hospital stay were 7 and 20 days respectively; major post-operative complications were registered; 2 pts died in the post-operative period.

Conclusions: The overall outcome of pancreatic surgery in the elderly is acceptable; furthermore if we consider that it represents the only chance of cure in several pts with pancreatic disease we think that it should be offered also to elderly pts.

References

A26

The influence of age in decision-making of patients with HCC

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BMJ Geriatrics 2010, 10(Suppl 1):A26

Background: Hepatocellular carcinoma (HCC) is usually associated with liver cirrhosis and is the principal cause of death among patients with cirrhosis [1]. Apart from liver transplantation that may cure both conditions, treatment of HCC and cirrhosis is complex because of the need to be oncologically radical but simultaneously conservative. Hepatectomy is considered an invasive approach and has a marginal role in the treatment of HCC [2,3]. A retrospective analysis of 62 patients affected by HCC observed from 2000 to 2008 was performed. The treatment choice was compared with the treatment schedule proposed by BCLC. Among these patients, 27 (43.5%) were over 70 years old; of these 16 were men and 11 women. Regarding Child classification 18 patients (66.6%) were Child A, 8 (29.6%) Child B and 1 (3.8%) Child C. We evaluated the influence of age in our clinical behaviour, exploiting the BCLC guidelines. In 9 (33.3%) cases patients were treated according to BCLC algorithm but mainly with percutaneous ablation therapies, while in the remaining 18 (66.7%) cases there was an undertreatment in 15 (83.3%) patients and an overtreatment in 3 (16.7%). About the undertreatment cases we didn’t perform hepatic resection or liver transplantation such as BCLC suggests mainly because of advanced age (> 70 years old). With regard to the overtreatment we performed 3 transarterial embolizations rather than sorafenib or symptomatic therapy because the general conditions of patients were fairly good.

Conclusions: BCLC algorithm is considered the most important staging system for patients with HCC. This classification uses variables related to tumour stage, liver functional status, physical status but not the age of patients. This concept is very important because decision-making of hepatic surgeons often depends on age of patient. Although there are many papers in scientific literature that confirm the safety of surgery in elderly patients, it is also true that the risk of local and general complications is very high. The presence of comorbidity and refusal of patients to undergo surgery or liver transplantation are often the main reason for our clinical behaviour. In the management of these patients we have to consider the age and risk-benefit ratio.

References

A27

Management of colorectal cancer follow-up in elderly patients

S Puleo*, T R Portale, A Pesce, M A Trovato, Emanuele, Catania, Italy

BMJ Geriatrics 2010, 10(Suppl 1):A27

Background: Follow-up of surgically treated colorectal cancer patients is not supported by objectively certain data. Despite the thousands of investigations reported in the literature, only six randomized prospective studies and two meta-analysis of randomized studies provide data suggesting clear conclusions until today. The main goal of colorectal follow-up is to improve patient survival by early diagnosis of recurrence during the asymptomatic stage when radical surgical treatment is more viable [1]. However the reduction of global mortality from colorectal cancer achieved by follow-up, radical second-surgery and therefore new and definite patient recovery calculated in our patients in follow-up on 5 years disease free interval was only 2.6% according to the findings of other authors [2,3]. In our recent study carried out on a group of 280 patients in our follow-up the average age was 69.5 demonstrating that the age must be carefully considered in order to establish the follow-up timing and modulation and to calculate the cost-benefit ratio. In our experience the far from brilliant results obtained led us to change our follow-up in 2006 and make it less intensive, tailoring it to the stage of the disease, the reliability of the diagnostic methods, times of recurrences and no less important, the age of patients. In the aged obviously the surgical and/ or adjuvant and neoadjuvant treatments are to be considered with caution and local and general controindications to every type of therapy carefully evaluated. The age is a fundamental part of ASA, POSSUM and PST and could condition the therapeutic strategies. On the other hand many reports confirm the possibility of performing safe operation for liver and lung metastases or local recurrences in the elderly without a statistical higher rate of morbidity and mortality compounding with younger adults. Lastly, in our policy we have considered the agreement of elderly patients to modality and timing of follow-up on the basis of a study carried out with the collaboration of a psychological team. On the basis of those experiences we also believe that in some patients and circumstances a major involvement of family doctors substituting the institutional follow-up staff is necessary.

Conclusions: Thus, even if the follow-up is lacking in evidence of benefits it remains a “good practise”: however in the elderly we have to reflect, as does Smith in 1998, “is it really better to know one has incurable metastases earlier than to believe one is well when one feels well?”
**A28**

**Does age influence surgical treatment for breast cancer?**

M Renne, R De Vinc, V Diaco, M G Fava, L Roveda, G Vescio, D Voci, U Prati

**Material and methods:** From September 2006 to October 2009, 57 patients, aged over 70 years, were admitted for breast cancer; 13 patients were over 80.

80% of them had one or more co-morbidities and 30% of them had three or more co-morbidities.

All the patients received a core biopsy that confirmed invasive cancer, and then underwent surgery; 2 patients received HOT therapy with Aromatase inhibitor before surgery, having obtained a down-staging from T4 to T1c in sixth months of treatment. Three T4 patients are still under neo-adjuvant treatment. The opportunity of immediate reconstruction was always offered to patients candidate to mastectomy. The average follow up time was 15 months.

**Results:** 

- On the basis of TNM the patients were thus divided: 54.4% were early cases; 26.3% T2 N+ M0; 10.5% T3; 8.7% T4. All of them are still alive and disease free. Three patients, who were M1 at diagnosis, died during the follow up (average survival 6 months).

In our experience few patients had psychological problems with accepting mastectomy, nevertheless they refused reconstructive surgery. The overall amount of patients who required plastic surgery was low.

**Conclusions:** In our experience all the patients received the gold standard treatment despite age and co-morbidities. Nevertheless we think that in patients with depressive diseases, conservative surgery and radiotherapy can be considered as an alternative to a mastectomy.

**References**


**A29**

**Sentinel lymph node biopsy in elderly breast cancer**

S Ricciardi, C Terranova, R Ganesini, E Mioni, F Viano, L Facchin, L De Sants

**Background:** Elderly patients make up a large part of the breast cancer population and there are important specific considerations for this population. Studies of elderly women have found that Breast conservation therapy (ie, lumpectomy, axillary lymph node sampling, and postoperative RT) is often associated with better quality of life. Our Purpose was to evaluate the performance and feasibility of sentinel lymph node biopsy in patients aged ≥ 65 in Day surgery (DS).

**Materials and methods:** Between January 2005 and July 2009, we performed 53 Sentinel Node Biopsy (SNB), in patients with median age of 66 years, (range 24-87) with tumors of less than 3 cm with clinically negative axilla. The sentinel node was successfully identified in all the cases (100%) using technetium-99m (99mTc) sulphur colloid, injected the day before surgery. The following day the surgeon identified the sentinel node by gamma probe and marked it on the skin. We never used vital blue dye. In the great majority of patients we performed SNB and quadrantectomy in day surgery (DS) and local anaesthesia (LA) using the same incision or through a separate small incision in the axilla (2-3 cm). This approach was discussed with all patients and informed consent was obtained. The whole procedure took a median time of 40 minutes and all the patients tolerated the procedure very well with minimum discomfort.

**Results:** We identified the SLN in all patients (100%). The most common histological group was ductal carcinoma. Complete standard axillary dissection followed only if the sentinel node contained metastases. In 6 out of the 18 cases (32%) with histologically node-positive breast cancer, the sentinel node was the only lymph node affected. 2 cases showed a double SLN in the axilla. In the group with a metastatic node 5 (27%) were aged ≥65 years. No axillary recurrences were observed. Our results indicate that no significant disparities exist in the sampling of axillary lymph nodes among women based solely on their age.

**Conclusion:** This procedure is safe and well accepted in women aged 65 years and older. As regards hospital logistics, operations in DS and LA can be easily managed, leading to a significant cost reduction.

No significant disparities exist in the sampling of axillary lymph nodes among elderly women compared with younger women, and the whole procedure can be done in Day Surgery. The sentinel node biopsy remains a key component in determining stage, and thereby prognosis and appropriate treatment options also in elderly women.
Conclusions: The small sample size, the low methodological quality and the heterogeneity of the surgical procedures weaken the clinical usefulness of this review. There is no clear difference between the methods of surgical approach being the confidence of the surgeon in performing one procedure rather than another in the main outcome determinant. Larger and higher-quality trials are needed to improve the evidence to define the best surgical treatment for rectal prolapse.

References

A31
Early breast cancer in elderly women: surgery or primary endocrine therapy?
N Rocco , L Iannone, C Ripoli, D De Vito, A Accursio
Dipartimento di Chirur...
The advent of expandable endoprosthesis, in recent years,≥2007,≥Esophagectomy in elderly over 70 years of age.
The aging of the population and longer life expectancy et al: oral cavity and septic cariogenic focuses
74(4)
parotomy with right thoracotomy Jap. J. OF Clinical Oncology 2010,≥2002,
A34
Anastomotic leak and fistulization represent, in our University Chieti-Pescara,
133(5)
Liver resection is a curative treatment for hepatocellular 61 patients with esophageal pathology have
65 years) with HCC was proposed (July 2000-September
A cohort of 45 Child-Pugh class A or B patients was collected.
31
or diffuse metastasis, we perform palliative procedures. The by-pass with left colon graft was used in 24 cases, with high mortality and morbidity and poor mean survival (9,7 months); at the moment, in such cases, we prefer to use tubulized stomach at retrosternal place. Non expandable wallstent has been applied with open surgical procedure in 14 cases (mortality 35%;morbidity 50%). In 19 patients in whom we applied a non expandable stent by endoscopic technique (Nottingham set) we report no mortality and low morbidity. Finally 40 patients were treated with simple endoscopic dilatation (Maloney's metal probes), with no mortality and mean survival (6,3 months) just under that obtained with a palliative by-pass.
Conclusions: The advent of expandable endoprosthesis, in recent years, has changed our therapeutic approach in palliative treatment of esophageal-cardiac cancer in the elderly. By-pass procedures, in our experience, have gradually declined in order to increase mortality and lower survival of treated patients. We believe that by-pass procedures for this digestive system tract exist due to the fact that the use of the expandable wallstent is limited by high costs, about 10 times higher than those of traditional implants.
References

Table 1 (abstract A33). Palliative treatment (250 patients)

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Patients</th>
<th>morbidity</th>
<th>Mortality</th>
<th>survival(*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>palliative resection</td>
<td>148</td>
<td>18 (12%)</td>
<td>13(9%)</td>
<td>21</td>
</tr>
<tr>
<td>By pass</td>
<td>29</td>
<td>8 (27%)</td>
<td>6 (20%)</td>
<td>6.5</td>
</tr>
<tr>
<td>Endoprosthesis (T)</td>
<td>14</td>
<td>7 (50%)</td>
<td>5 (35%)</td>
<td>3.1</td>
</tr>
<tr>
<td>Endoprosthesis (P)</td>
<td>19</td>
<td>1(5%)</td>
<td>0</td>
<td>6.5</td>
</tr>
<tr>
<td>Dilatation</td>
<td>40</td>
<td>1 (2.5%)</td>
<td>0</td>
<td>6.3</td>
</tr>
<tr>
<td>Laser</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* median survival in months

A35
Esophageal resection in the elderly
G Sarmmarco¹, G Vesco, A Puziello, E Marra, R Sacco
Cattedra di Chirurgia Generale. General Surgery, “Magna Graecia” University, Catanazzo, Italy
BMC Geriatrics 2010, 10(Suppl 1):A35

Background: The aging of the population and longer life expectancy entails an increased number of elderly patients with esophageal cancer and benign pathologies referred for surgical treatment. Esophageal cancer is a pathology that mainly involves elderly patients. The aim of this study is to assess the effects of age on the outcome of surgery for esophageal cancer and benign pathologies in patients treated in our department.

Materials and methods: 61 patients with esophageal pathology have been treated from 2001 to 2009(23 benign; 38 malignant). Patients have been accurately examined in the pre-operatory stage. According to our protocol patients underwent: oral cavity and septic cariogenic focuses drainage- correction of malnutrition and hydro-electrolytic imbalance- correction of possible immunodepression- respiratory preparation- antibiotic therapy of silent bronchopulmonary infections - deep venous thrombosis prophylaxis- concomitant pathologies treatment. We perform: total esophagectomy in cervical and thoracic carcinoma- subtotal esophagectomy with intrathoracic anastomosis in lower third carcinoma of the esophagus. Ways of access: laparotomy with right thoracotomy and pretero-cleidomastoid cervicotomiy for total esophagectomies or left thoraco-phrenolaparotomy for subtotal esophagectomies with endothoracic anastomosis. Heller-Belsey myotomy in achalasia of the cardio- Belsey Mark IV antireflux procedure in hiatus hernia.

Results: Global Mortality: 5% (this result is significantly correlated with the major complexity of the treatment which includes esophagectomy and consequent reconstruction). No cases of mortality related to non-resective procedures such as myotomy and fundoplication have been registered (Morbidity: 8%), Table 1.

Conclusions: Anastomotic leak and fistulization represent, in our experience and in those cases reported in the literature, the main complications in resective operations. Both morbidity and mortality reflect what has been reported in other case series; this led to consideration of the acceptability of the risk related to the esophageal surgery and the possibility to perform the thoracic access, in patients over 70 years of age, provided that some conditions such as the detection of preexisting and concomitant pathologies and an accurate preoperative preparation of the patient are met. Advanced age should not be relied on as a contraindication to esophageal resection especially if surgery represents the only possible way of treatment, as in the case of malignancy, but surgeon’s efforts must be directed towards a meticulous pre-operative diagnosis and prophylaxis of comorbidities.

References

Table 1 (abstract A34). perioperative morbidity and mortality in order to surgical treatments

<table>
<thead>
<tr>
<th>Operation</th>
<th>N</th>
<th>Morbidity</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esophagectomy(cervical anastomosis)</td>
<td>28</td>
<td>2(7%)</td>
<td>2(7%)</td>
</tr>
<tr>
<td>Esophagectomy (thoracic anastomosis)</td>
<td>12</td>
<td>2(16%)</td>
<td>1(8%)</td>
</tr>
<tr>
<td>Heller</td>
<td>11</td>
<td>1(9%)</td>
<td>-</td>
</tr>
<tr>
<td>Mark IV</td>
<td>8</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Myotomy-diverticulopessi</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL</td>
<td>61</td>
<td>5(8%)</td>
<td>3(5%)</td>
</tr>
</tbody>
</table>

* median survival in months

A35
Results of surgical and percutaneous ablative therapy for hepatocellular carcinoma in elderly patients
F Selvaggi¹, D Risio, R Dimalo, C Cellini, D Simo, R Cotellese, M Legnini, P Innocenti
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BMC Geriatrics 2010, 10(Suppl 1):A35

Background: Liver resection is a curative treatment for hepatocellular carcinoma (HCC) [1]. Its role for the elderly remains undefined. In addition to surgery, percutaneous procedures have recently been proposed [2,3]. The choice of surgical and non-surgical therapy closely depends on the liver functional reserve and pre-existing co-morbidities.

Materials and methods: A retrospective analysis of a geriatric population (≥ 65 years) with HCC was proposed (July 2000-September 2009). Morbidity, survival, and recurrence rate were evaluated.

Results: A cohort of 45 Child-Pugh class A or B patients was collected. Of these, twenty-seven underwent surgery (male/female, 22/5; mean age 70). For 18 cases transcatheter arterial embolization (TACE), radiofrequency ablation (RFA), and portal vein embolization (PVE)(male/ female, 15/3; mean age 74) were indicated (see Figure 1). Twenty patients with hepatitis C infection, 7 with hepatitis B infection, 2 with both infections, 2 with alcoholic disease, and 14 with unknown etiology. The mean tumor size in the surgical group was 4.41 cm, range 1.2 -12 cm; in the non-surgical cohort the size was 6.31 cm, range 3-11.5 cm.
Twenty-eight unifocal and 17 multinodular tumors. We reported the aminotransferase serum variation after surgery and the tumor histology (see Figure 2). One patient died from liver failure. Nonlethal complications occurred in 21 patients. One case of biliary fistula and 1 intra-abdominal bleeding. The mean overall survival after surgery was 50 months. For ablative procedures was 26 months. The disease-free survival was in media 32 months the for surgical group and 18 months for the non-surgical group. Kaplan-Meier curves show the statistical significance (see Figure 3).

Conclusions: The role of liver resection for HCC is debated in the elderly. This is related to the short life expectancy and improvement of percutaneous procedures. These seem to guarantee similar overall survival compared to surgery. Unfortunately, this was not demonstrated from our data. With the improvement of surgical and anesthesia support, mortality has been significantly reduced. We performed liver resections in selected cases and our experience confirms the surgical benefits in elderly population.

References

Figure 1 (abstract A35). Type of surgical and non-surgical treatment options in our experience. Percutaneous procedures: radiofrequency ablation (RFA); transcather arterial embolization (TACE); portal vein embolization (PVE) (a, b).

Figure 2 (abstract A35). Pathologic features of HCC specimens. In the majority of cases, tumor has showed a mild differentiated growth pattern (a). Perioperative laboratory values of liver damage: the mean Aspartate aminotrasferase (AST) and alanine aminotrasferase (ALT) serum level detected during pre-operative time and post-operative day 1, 3, and 7 (b).

Figure 3 (abstract A35). Kaplan-Meier overall survival and disease-free survival curves for HCC in elderly patients: surgical and non-surgical groups.
A36
Informed consent: results of a study in a geriatric surgery division
C Terranova 1, A Bruttocao 2, R Nistri 1
1Department of Environmental Medicine and Public Health, University of Padua, Italy; 2Department of Surgical and Gastroenterological Sciences, University of Padua, Italy
BMC Geriatrics 2010, 10(Suppl 1):A36

Background: Informed consent is a process during which the physician informs the patient of his diagnostic and treatment options; informing the patient about the risks of the procedure as well as the benefits, can help him/her to make a rational decision regarding his health. A paternalistic relation between the physician and the patient is antithetical to the concept of informed consent [1]. In elderly patients’ impaired decisional capacity, observed in relation to the presence of neurological pathologies like Alzheimer disease and associated disorders [2], can influence the collection of a valid informed decision.

The capacity in elderly patients of a surgery geriatric division was evaluated to discuss the possible implications from an ethical and legal point of view of a correct collection of an informed consent.

Patients and methods: The study is conducted on 100 patients aged over 70 years, hospitalized in a geriatric surgery division during the period September - November 2009. The methodological approach is based on the following steps: 1. analysis of medical documentation; 2. anamnesis; 3. collection of data concerning education, previous informed consent, knowledge of diagnostic and treatment options; 4. clinical-behavioral examination by means of administration of Mini-mental state examination (MMSE) and clock drawing test. The collected data are recorded in a database.

Results: Preliminary results in some cases highlight impaired cognitive functions that could influence the expression of a valid informed consent.

Conclusions: Informed consent is relevant from an ethical and legal point of view of a correct collection of an informed consent. The analysis of the data highlights the importance of the physician – patient relationship in the collection of the informed consent. In some cases the physician should be aware of the possibility of identifying the patient’s characteristics associated with impaired capacity; in such cases formal capacity evaluations and/or enhanced consent procedures may be most appropriate.

References

A37
Thyroid surgery in an elderly population
F Vianelli 1,*, C Terranova 2, S Ricciardi 3, E Moni 4, R Ganesini 5, S Facchin 6, M Giachetti 7, M Mascavé 8, L De Santis 9
1Department of Surgery, Division of Surgery, Ospedale “San Lorenzo”, Valdagno, Italy; 2Department of Environmental medicine and public health, Section of Legal Medicine, Hospital-University of Padova, Italy; 3Department of Internal Medicine, Endocrinology service, Ospedale “San Lorenzo”, Valdagno, Italy; 4Department of Emergency Medicine, Ospedale di lIvea (TO), Italy
BMC Geriatrics 2010, 10(Suppl 1):A37

Background: The increase in life expectancy over the past 20-30 years has caused major changes in the average age of patients hospitalized in surgical wards. The thyroid disease is common in the elderly population [1]. Elderly patients, especially with co-morbidity, are at increased operative risk [2]; the pre-operative selection and perioperative monitoring have to be more accurate than in young patients; a lack of competence in these phases can result in clinical and medico-legal consequences.

Table 1 (abstract A37)

<table>
<thead>
<tr>
<th>Age (range)</th>
<th>ASA score %</th>
</tr>
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<tbody>
<tr>
<td>67 (60 – 80)</td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASA score</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>2</td>
<td>82</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
</tr>
</tbody>
</table>

Table 2 (abstract A37). Surgical indications

<table>
<thead>
<tr>
<th>Surgical indications</th>
<th>N°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multinodular goiter</td>
<td>52</td>
</tr>
<tr>
<td>Mediastin Goiter</td>
<td>19</td>
</tr>
<tr>
<td>Toxic Multinodular goiter</td>
<td>12</td>
</tr>
<tr>
<td>Graves’ disease</td>
<td>9</td>
</tr>
<tr>
<td>Adenoma</td>
<td>4</td>
</tr>
<tr>
<td>Papillary carcinoma</td>
<td>14</td>
</tr>
<tr>
<td>Follicolar Cancer</td>
<td>6</td>
</tr>
</tbody>
</table>

The aim of the study was to present a retrospective analysis of 124 elderly patients who had undergone thyroid surgery at the Department of Surgery Hospital of Valdagno.

Patients and method: The study included 124 patients (26 male, 98 female), aged above 60 (average age 67.34 maximum 60 and 80 years old) that underwent thyroid surgery between 2005 and September 2009 (Table 1). 24 patients were ASA 1, 82 ASA 2 and 18 ASA 3 (Table 1). Endocrinological examination, evaluation of the mobility of the vocal cords, thyroid hormones dosing and ultrasound evaluation of the thyroid, were performed before the operation.

113 total thyroidectomy and 1 hemithyroidectomy were carried out; 106 patients were operated on for benign diseases (toxic and non toxic multinodular goiter, Graves’ disease, adenoma) 18 for malignant disease (follicular cancer, papillary carcinoma) (Table 2).

Results: The average hospitalization length was 6.1 days (5-8 days).

Complications occurred in 12 patients (9.6%): 1 case of transient bilateral vocal cord paralysis requiring the execution of a tracheostomy with complete resolution after 10 days, 10 cases of transient hypocalcemia treated with calcium and vitamin D3 supplements and 1 case of postoperative bleeding. There was no postoperative mortality.

Conclusions: Population ageing will determine an increase of thyroid surgical procedure in elderly patients.

The analysis of the data provided showed that thyroid surgery in the elderly can be performed with satisfactory results with an incidence of complications similar to those observed in young patients [3].

References

A38
Tailored surgery in elderly patients with breast cancer: our experience
S A Villari 1, F Farnà, P Scarfì, A Pollicino, M A Girofì Flori
Department of Emergency Care Unit, University of Messina, Italy
BMC Geriatrics 2010, 10(Suppl 1):A38

Background: The incidence of breast cancer increases with advancing age. Although breast cancer in elderly patients presents corresponding
biological characteristics to similar-stage cancer in younger women, the treatment is under standardized. This population is rarely included in randomized clinical trials. In absence of guide lines, tailored surgery has an important role in older women breast cancer treatment.

**Materials and methods:** From 2000 to 2008 we observed 162 cases of breast cancer in elderly women (65-88 years old). Of these, 138 (85.2%) were at a local stage; 24 (14.8%) were locally advanced: 17 (70.8%) stage IIa, 5 (20.8%) stage IIb, 2 (8.4%) stage IV. Comorbidity existed in 69% of cases. Tailored surgery considers: clinical status of the patients, size, grade and location of the tumor. Were performed: 26 Madden modified rectal resection, 51 quadrantectomy, 47 segmentectomy, 38 lumpectomy. We prefer to carry out periareolar and sub-mammary incisions, it depends on the seat and stage of neoplasia.

**Results:** Our patients didn't have any complications after surgery and they have been satisfied with the aesthetic results. We have not observed local recurrences. Only two patients developed metastasis (1 cerebral and 1 pulmonary).

**Conclusions:** Tailored surgery represents good treatment for this population, because it evaluates clinical status, survival expectation, risk factors, comorbidity and respects the wishes of the patient who often prefers and asks for conservative surgery. Comorbidity seems to primarily influence the prognosis but not the immediate results. General anesthesia is performed for the treatment of the primitive tumor, axillary clearance and sentinel lymphnode dissection, otherwise, it is mandatory local anesthesia. In much older patients, residual breast radiotherapy depends on the local recurrences risk and life expectation. Hormone therapy is recommended, because of the high receptoral positivity, at this age. The scientific interest should be encouraged, because the extension of middle age, will inevitably involve an increased number of cases in elderly patients with these pathologies and will impose the identification of suitable therapeutic strategies. Today in our opinion, the best treatment must be tailored to the single patient.

**References**

**SPECIALIZED SURGERY**

**A39 Urological involvements in pelvic oncologic surgery**
A. Accaccia
Nuova Villa Claudia 00196 Roma, Italy
BMC Geriatrics 2010, 10(Suppl 1):A39

**Background:** The best way to peer view the subject is to discuss a study which has been done in the Institute of Neurotraumatology La Sapienza 1* University of Roma Italy 30 years ago.

**Materials and methods:** First Group: 10 Patients (aged 35-66) operated of Anterior Rectal Resection + Aortic/ Cava lp epithaneotomy examined 15 days after the surgical procedure and followed up along 4 years. The conclusion was that rectal surgery is invariably followed by urological/ sexual complications.

Second Group: 5 Patients (aged 25-71) operated of Anterior Rectal Resection without lymphadenectomy followed 2 years after the procedure and then periodically for a period of 5 years. The conclusion was that non-radical rectal surgery brings on urological/sexual troubles.

Third Group: 12 Patients (aged 41-73) operated of Abdomino/ perineal Rectal Amputation started their follow-up 1 year after the operation and continued for a period of 9 years. All of them showed severe urological/sexual complications.

**Results and conclusions:** The basic remark deals with the old age of almost all the Patients candidates to pelvic oncologic surgery. The diseases of the lower urinary tract are frequent not to mention erectile disfunctions. In older women preexisting urethrocystocele, stress, incontinence and hormonal imbalance have to be taken into consideration. But the main remark is that pelvic oncologic surgery “per se” (open, laparoscopic/robotic) + the possible complications during its follow-up enhance the risk of disruption or lesions of pelvic autonomous nervous system and sometimes (major oncologic surgery) of the pelvic somatic nervous system going to the pelvic floor.

Of paramount importance is the vesicouretal disalignment after radical pelvic surgery.

There is no doubt about the increasing involvements after lymphadenectomies. Patients undergoing pelvic oncologic surgery must be informed of possible urological/sexual troubles. A complete examination of the Urinary Tract and of the sexual situation.

Management of the indwelling urinary catheter is important. In the presence of severe problems the Surgeon should ensure that lesions of the pelvic nervous system do not lead to total the enervation of the bladder which contains in the detrusor and the mucosa the metasympathetic system. That’s why the main therapeutic objective in this situation is to avoid damaging the bladder.

**A40 Surgical revascularization of critical ischemia of lower limbs: current guidelines and personal experience**
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BMC Geriatrics 2010, 10(Suppl 1):A40

**Background:** Peripheral arterial occlusive disease (PAOD) of lower extremities has been attributed primarily to atherosclerotic changes and the risk factor associated with atherosclerotic disease, including smoking, male gender, hypercholesterolemia, diabetes and age. The prevalence of CLI in general population as an adjusted rate of 3-5%. Critical limb ischemia is the most debilitating symptom of PAOD. The rational treatment of the CLI is surgery or endovascular approach.

The present study was performed to determine the outcome of infrainguinal by-pass a popliteo-to-distal by-pass surgery for limb salvage in the treatment of the critical limb ischemia.

The result of lower extremity by-pass surgery have traditionally been assessed by patency rate, uncomplicated wound healing, limb salvage, and patient survival rate.

**Materials and methods:** Limb salvage patients included in this study from December 2004 to January 2009. Limb salvage indication for surgery were defined as ischemic rest pain, ischemic ulcer or gangrene, acute or subacute ischemia and ankle-brachial index pressure less than 0.5.

The patients treated with surgery revascularization for CLI were 96. In this group, the infrainguinal bypass was performed on 62, and the popliteo-tibial bypass was performed on 34.

Operative results, including mortality and morbidity data, primary patency rate, healing of ischemic wounds, limb salvage rate, and patients survival rate. Primary patency and patient survival rate calculated in the 6-month, 3-year and 5-year by life table methods.

**Results:** During a 4 year period of study we recorded: Mortality in this group study six-patients (7%), cumulative morbility 36 patients (38%); mean primary patency 82% and mean limb salvage (88%); healing ischemic wounds.

The present study was undertaken evaluate to evaluate the validity of the infrainguinal and popliteo-to-distal bypass in the treatment of critical limb ischemia.

The traditionally of placing the anastomosis of infrainguinal by-pass in the common femoral artery prevailed until 1981, when the short bypass principle was proposed, popliteal-to-distal by-pass has evolved as the most typical short bypass which is applicable to only a small fraction of patients who have nearly popliteal artery pulse and obstructive pathology of the pedal artery.

With the use PTA for the treatment of the short lesions in the superficial femoral artery, there has been an increase in the applicability of a PD bypass. A major advantage of this PD bypass is the possibility of frequently using of the GSV in situ or reversed configuration.

**Conclusions:** The infrainguinal bypass and popliteal-to-distal bypass (in the obstructive pathology of the pedal vessel) is a tool of high efficiency in the treatment of severe, chronic critical ischemia in the lower limb.
A41
Endovascular laser treatment of varicose veins of the lower limbs: results and personal experience
A Alberti1*, G Uslenghi1, V Frosina1, A Malara1, V U Alberti2
1Department of Surgery, Operative Unit of Vascular and Endovascular Surgery, Riuniti Hospital City of Reggio Calabria, 89124, Italy ; 2Department of Cardiovascular Surgery, Operative Unit of Vascular Surgery, “San Filippo Neri” Hospital, City of Rome, 00135, Italy
BMC Geriatrics 2010, 10(Suppl 1):A41

Background: Great saphenous vein (GSV) reflux is an important component of the pathophysiology of primary venous insufficiency. For nearly a century vein saphenous stripping has remained the standard surgical therapy with the recurrence rates from 20% to 80%. Endovenous laser therapy (EVLT) is an alternative and minimally invasive procedure for the treatment of saphenous vein incompetence. This procedure is designed to ablate GSV as a percutaneous approach to minimize the complications and discomfort associated with surgical stripping.

We have performed the procedure at the Operative Unit of Vascular Surgery – General Hospital of Reggio Calabria, had compared the traditional surgery with EVLT in the management of the saphenous reflux.

Materials and methods: All patients were selected from our Division of Vascular Surgery, history and physical examination were performed. Duplex color scanning to document patency of deep veins and to evaluate to valve reflux time.

Clinical records of 78 consecutive patients who underwent endovenous GSV ablation with EVLT over a 5 year period between January 2004 and June 2008, were retrospectively reviewed. All patients had symptomatic varicose veins with documented GSV incompetence and were classified to the CEAP classification.

Under ultrasound guidance the GSV was punctured with an 18 – 19 G needle and was after cannulated 45 cm angio-shaeth over a J – tip guidewire. And 810 nm diode laser fiber.

Early post-operative evaluation by-color-duplex-scanning was started 1 month from EVLT, successful obliteration was confirmed by the evidence of a non compressible GSV and no color flow on duplex analysis.

Results: Ninety-six limbs in 78 patients were treated, 84% woman and 16% man.

Mean age of 53 (range 25 – 84). All patients had symptomatic varicose vein and primary valvular incompetence. Adjunctive procedures included phlebectomies and subfascial endoscopic perforator surgery (8 patients).

Immediate success was obtained in all patients (100%). In no case the procedure was aborted. Early post-operative duplex color revealed 4/78 early GSV recanalization, 2 partial and 2 total. No deep venous thrombosis were revealed.

Late post-operative color Doppler and clinical examination are detected in the 8 (9%) patients symptomatic leg varicosities and duplex ultrasound reflux in GSV.

Conclusions: Endovascular laser treatment of GSV incompetence have been introduced as minimal alternatives to open surgical ligation and stripping. Although the surgical stripping can lead to painful and prolonged postoperative recovery with risk of infection, hematoma, and nerve lesions.

A42
Prevention and surgical treatment of lymphatic injuries in geriatric surgery
F Boccardo*, C Campisi, S Accogli, C Campisi, C Campisi
Department of Surgery, Unit of Lymphatic Surgery and Microsurgery, San Martino Hospital, University of Genoa, Italy
BMC Geriatrics 2010, 10(Suppl 1):A42

Background: The rate of occurrence of post-operative complications after inguinal lymphadenectomy reported in Literature is of 6-40% for seromas or lymphocele, 2-4% for haematomas, 17-65% for wound dehiscence, 6-20% for wound infection and 22-80% for lymphoedema (1-3).

Figure 1 (abstract A42)
The problem of prevention of lymphatic injuries in geriatric surgery is extremely important if we think about the frequency of both early complications such as lymphorrhoea, lymphocele, wound dehiscence and infections and late complications such as lymphangites and lymphedema. Nowadays, it is possible to identify patients at risk and prevent these lesions or treat them at an early stage. This study helps to demonstrate how important it is to integrate diagnostic and clinical findings in order to better understand how to properly identify patients at risk of lymphatic injuries and, therefore, when it is useful and proper to use prevention.

**Material and methods:** The authors’ experience includes 85 geriatric patients who underwent procedures to prevent and/or treat lymphatic injuries after trauma or surgery. The main causes of secondary lymphatic injuries are represented by surgical operations, irradiations, infections, traumas, metastatic lymphnodal involvement. The high risk surgical operations include: radical mastectomy, Wertheim-Meigs operation, oncologic operation in urology, abdominal surgery, lymphadenectomies in “critical sites” (groin and axilla). Other operations are represented by resection of lipomas in critical sites, saphenectomy, inguino-crural hernioplasty. Authors report their experiences in the prevention and treatment of lymphatic injuries after surgical operations and trauma in geriatrics. After an accurate diagnostic approach (also lymphoscintigraphy), prevention is based on different technical procedures among which microsurgical procedures. It is very important to follow-up the patient not only clinically but also by lymphoscintigraphy.

**Results:** A protocol of prevention was identified of secondary limb lymphedema that included, from the diagnostic point of view, lymphoscintigraphy and, as concerns therapy, it also recognized the role of early microsurgery. It is necessary to accurately follow-up the patient who has undergone an operation at risk for the appearance of lymphatic complications especially in geriatric age and, even better, to assess clinically and by lymphoscintigraphy the patient before surgical operation.

**Conclusions:** Authors’ proposal of prevention and early treatment of secondary lymphatic injuries (Figure 1) might, therefore, be applied by all different specialists (general surgeons, urologists, gynaecologists, oncologists, radiotherapists) during their daily clinical activity to try to get to the aim of preventing the patients, especially in geriatrics, who undergo “risk” operations, from also fighting against complex lymphatic acquired disorders such as lymphorrhoea, lymphocele, lymphedema, besides their already more or less serious primary pathological condition.

**References**


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**A43**

**Radiofrequency obliteration to treat the great saphenous vein insufficiency, an option in geriatrics patients**

B Bonfiglio, G Dipaola, G Navarra
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**BMC Geriatrics** 2010, 10(Suppl 1):A43

**Background:** Radiofrequency (RF) ablation of Great Saphenous Vein (GSV) without high ligation, using controlled-heating to close vein. A minimally invasive treatment alternative to conventional surgery represents a valid option for geriatrics patients with venous insufficiency.

**Materials and methods:** From 2001 to 2007, 123 patients 62-86 y.o. (average 74), with GSV insufficiency, selected through ultrasound examination according to the features of GSV: duration reflux longer 1°; diameter between 5 and 12 mm; distance to skin > 5mm [1]; preterminal valve incompetent, terminal valve competent, regular path and bore. Patients were not affected by severe leg arteriopathy (ABI ≥ 1). The operation was performed in day surgery and local anesthesia. For 42 (34%) saphenous diameter sized between 5-8 mm, used 6F catheters, other 81(66%) between 8-12 mm, used 8F catheters. Intraoperative ultrasound examination performed to control the catheter position (Figure 1), also after procedures to confirm vein occlusion and saphenous-femoral junction patency. Then compressive-elastic stocking was applied and they were discharged after 2 hours and returned to normal activity after 24-36 hours.

**Results:** All patients had slight post-operative pain in the path of the treated saphenous segment, disappearing in 5-7 days. They have been clinically checked after 3 and 6 days and with duplex-scanned after 30 days, 6 months, 1 and 2 years. Elastic-compression stocking was removed after 3 days. Only 5(4%) patients had little haematomas in the surgical incision site, disappeared in 7-10 days, 2 (2%) patients had paresthesia. Duplex scanning showed one recanalization (1%), other veins were fibrotic 1 month later and 6 months later they were completely sclerosed and barely visible as a weak hyperecogenic signal (Figure 2). GSV
RF treatment is more appreciated, especially by elderly, because it is minimally invasive allowing immediate discharge, rapid return to normal activity, mild pains. It represents a valid option in geriatrics patients with venous insufficiency. However, a correct selection of patients is necessary on accurate studying of features of GVS, excluding arteriopathy and pacemaker. RF treatment causes permanent closure of GSV, showing lasting over time efficacy, without the morbidity and longer convalescence associated with conventional surgical vein ligation and stripping [2] but results depend on careful execution of procedure.

References

A44
Two cases of hypertensive Martorell’s leg ulcers
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BMC Geriatrics 2010, 10(Suppl 1):A44

Background: Martorell’s ulcer is also a type of ischaemic ulcer occurring in hypertensive patients. The main features of this lesion are the following: location on the lower antero-exterior surface of the lower two thirds of the leg; pain far more severe than is expected given the size of the ulcer; significant arterial or venous disease; female-to-male predominance, association with no-controlled hypertension [2]. We describe two recent cases of hypertensive patients.

Materials and methods: 1) A 78 years old female showed a painful ulceration on the lower-anterior surface of the left leg, sized 2 × 4 cm (see Figure 1), covered by fibrinous exudates, demarcated margins and hyperaemic perilesional skin. She said she was not hypertensive and did not take antihypertensive drugs but, on clinical and physical examinations, her blood pressure was 195/90 mmHg on the left arm and 187/85 mHg on the right. Ultrasound showed moderate arteriopathy and good peripheral flow. To control blood pressure the patient was treated with combination ACE inhibitors and diuretics, pentoxifylline, mesoglicane, topic treatment with enzymatic debridment and promogran wound dressing. Follow up to 7, 15 days we observed normalization of the arterial pressure and ulcer reducing size to 1.5 × 2.5 cm, the patient was pain free. 30 days follow-up ulcer is closed.
2) A male 63 years old, smoker, with an ulceration on the lower-lateral surface of the right leg, sized 1 × 2 cm and other satellite smaller lesion 1 × 0.4 cm, covered by fibrinous exudates (see Figure 2). Ultrasound showed moderate arteriopathy but good peripheral flow. Blood pressure was 200/95 mmHg on the left arm and 190/85 mHg on the right. Patient was treated, also, with combination ACE inhibitors and diuretics, pentoxifylline, mesoglicane, topic treatment with enzymatic debridment and promogran wound dressing. Follow up to 7,15 days showed normalization of pressure, no pain, 90% epithelialization of main ulcer and closure of the smaller.

Results and conclusions: Martorell’s ulcers are associated with longstanding or poorly controlled hypertension. Antihypertensive therapy controlling arterial pressure and topic treatment result in the resolution of these very painful lesions [1].

References

A45
Color-Doppler-Ultrasound guided compression to repair common femoral artery pseudoaneurysm
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BMC Geriatrics 2010, 10(Suppl 1):A45

Background: The insurgence of post-catheterization pseudoaneurysms has dramatically increased among the elderly if compared to the past, due to the spreading of endovascular treatments, both of diagnostic and surgical nature. The case presented here shows the usefulness of eco Color Doppler in this kind of pathology.

Materials and methods: Female, 76 y.o., with coronary disease, had undergone coronarography at another hospital. She came to our attention a month later, for suspected deep venous thrombosis of the right leg; we performed an Eco-color-Doppler on her, that showed a pseudoaneurysm of the common femoral artery, sized 4,5 mm × 3,4 mm (see Figure 1). The pseudoaneurysm was treated with ultrasound-guided compression through 7,5 MHz linear probe for about 55’, until the pseudoaneurysm was totally excluded from the femoral artery due to the formation of a thrombus inside it (see Figure 2). A week later, the eco-color-Doppler showed the stabilisation of the thrombus. One month later, the pseudoaneurysm was reduced, no flow was detected into it and no communication to the femoral artery remained.
The occurrence of post-catheterization ulcers in the elderly groups is the diabetic foot.

Materials and methods: From 01.01.2004 to 31.12.2008, 100 patients (average age 74.5 ± 7.3) affected by insulin dependent diabetes complicated by sepsis and abscess of the lower limb were treated in emergency surgery. The inclusion of subjects in the study was considered ethically correct assessment by medical examiner.

61 patients were submitted after a visit to immediate surgical drainage and conservation therapy had been implemented (group B), while 59 patients were transferred from other departments after an average stay of 6.9 ± 3.6 days during which only conservative therapy had been implemented (group A).

Results: No differences were found between the 2 groups regarding age and clinical features (general conditions, concomitant diseases etc.), except for the following differences in Group B: higher levels of glucose in the blood (P = 0.015), lower levels of albumin (P = 0.005), and more frequent extension of inflammatory processes to proximal regions of leg (P = 0.005).

The resolution was achieved in group A, without amputation in 13 patients, with amputation of 1 or more toes in 28, with metatarsal amputation in 18 and with Chopart amputation in 2 cases.

Group B: incision and drainage were sufficient only in 4 patients, amputation of 1 or more toes in 21, minor amputations (metatarsal) in 10, Chopart amputations in 20 patients and major amputations (leg) in 4 cases.

The level of amputation was significantly more proximal in group B (Chi2 = 24.3 P < 0.001).

The logistic regression analysis showed a significant relationship between the level of amputation and the number of days elapsed before debridement (odds ratio, 1.61; P = 0.015; confidence interval, 1.10–2.36), but not in the presence of peripheral occlusive disease (odds ratio, 1.72, P = 0.376; confidence interval, 0.28–15.2).

Conclusions: In elderly patients with a diabetic foot, the function of the lower limbs is significantly reduced in the case of delayed surgical debridement because of the inflammatory process.

Site of ulcer lesions in diabetic foot of the elderly

Clinical background: In diabetic patients, especially if elderly, skin ulcers of the foot are among the most debilitating complications. The main risk factors for the ulcer development are diabetic neuropathy (sensory, autonomic), lower limb ischemia (diabetic arteriopathy), limited mobility and altered plantar pressure.

The aim of the study was to evaluate the different sites of the diabetic ulcers with regard to their origin.

Materials and methods: From 01.01.2004 to 31.12.2008, 402 diabetic patients were evaluated: 296 were over 65 years old (median age: 78.5 ± 6.2 years), with comprehensive 639 ulcers in lower limbs; The inclusion of subjects in the study was considered ethically correct assessment by medical examiner.

These lesions were divided into 3 groups by their origin: neuropathic, ischemic and neuroischemic.

Results: No differences were found in the lesion distribution in patients younger than 65 (not a statistically comparable number), while in the others (patients over 65 years old) there was a clear difference of site: in neuropathic patients the ulcers incidence were more in the plantar surface of the foot (52.1%), especially in metatarsal heads area (49.6%). The ischemic group had the most frequent ulcer sites in the extremities of toes (68.5%), while the neuroischemic lesions were located on both plantar surfaces (59.8%).

Conclusions: The different distribution of ulcers in the elderly groups was statistically significant and it seems to be correlated with their etiology (p < 0.0001).
A48
Rate of amputation and mortality in new-onset diabetic foot ulcers in the elderly
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BMC Geriatrics 2010, 10(Suppl 1):A48

Background: Foot ulcers and their complications are an important cause of morbidity and mortality in diabetes. The present study aims to examine the long-term outcome in terms of amputations and mortality in patients with new-onset diabetic foot ulcers in subgroups stratified by etiology.

Materials and methods: Elder Patients (age over 65) presenting with new ulcers (duration <1 month) between 2006 and 2008 were studied. Enrolment in the study was considered through an ethically correct assessment by medical examiner. A baseline clinical examination was done to classify ulcers as neuropathic, ischemic, or neuroischemic. Two-year amputation and mortality rates were derived from Kaplan-Meier survival analysis curves.

Results: From 01/01/2006 to 30/12/2008 72 patients (mean age 74.2 ± 5.3 years) with lower limb injuries ulcerarive were assessed: 36 (50%), 15 (21%) and 21 (29%) subjects respectively had neuropathic, ischemic and neuroischemic ulcers. The mean follow-up period was 16 months (range 3-22). Two-year amputation rates were higher for ischemic (33%) and neuroischemic (29%) than neuropathic (8%) ulcers. Two-year mortality was 33%, 17%, and 60% for neuropathic, neuroischemic, and ischemic ulcers, respectively. Mortality was higher in ischemic ulcers than neuropathic ulcers, but on multivariable regression analysis, only increasing age was predicted for shorter survival time.

Conclusions: All types of diabetic foot ulcers are associated with high morbidity and mortality. The increased mortality appears in our experience, to be independent of factors increasing ulcer risk-that is, neuropathy and PVD-in patients with established foot ulcers. The investigation still needs to be extended to a greater number of patients to meet criteria for significance.

A49
Obesity and lymphedema in geriatrics: combined therapeutical approaches
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BMC Geriatrics 2010, 10(Suppl 1):A49

Background: Obesity combined with lymphedema, especially in geriatrics, is more than the sum of the two diseases [1] because it causes the diaphragm to be above its normal position, impairing its movement. As a consequence, a fundamental mechanism that supports lymph flow is significantly decreased. Obesity associated with lymphedema represents a cause of a highly invalidating condition. The purpose of this preliminary report is to propose a system of treatment, assessing the efficacy of a combined approach of lymphostatic disease in obese geriatric patients.

Materials and methods: A group of 6 geriatric patients affected by obesity (BMI > 35) and lower limb lymphedema (II to III stage) had been enrolled in this preliminary study. Patients underwent a protocol of treatment of lymphedema by Complete Decongestive Therapy (CDT) according to Foldi’s method. Patients had been under observation for six-twelve months. They were evaluated during this period of follow-up at 1-3-6 and 12 months. After 12 months those patients who were not significantly responsive to non-operative methods, without any important regression of previous lymphedema staging, had a lymphangioscintigraphy performed in order to evaluate a right indication to lymphatic-venous microsurgical anastomoses [2].

Results: Two patients showed a significant reduction (>50% in comparison to previous volumetry) of lower limbs affected by lymphstasis after CDT procedure, with a high level of patient satisfaction. Four patients, on the guide of lymphangioscintigraphy showing a relevant impairment of lymph transport capacity index of lower limbs, underwent Derivative Lymphatic-Venous Bypass microsurgical procedure (LVA), performing a simultaneous operation at both groin sites (Figure 1 and 2). Clinical and lymphoscintigraphic post-operative follow-up (evaluated at 3-5 years after surgery) showed a long-lasting improvement, with a marked edema and volumetric...

Figure 1 (abstract A49). Obesity and lymphedema: an example of successful outcome of the combined therapeutical non-operative and microsurgical approaches.
reduction maintained by a proper lifestyle, remedial exercise, elastic stockings and periodical CDT procedures.

Conclusions: Considering the high incidence of obesity and the not-unfrequent association with lower limb lymphedema, the method proposed of a combined approach in geriatric patients can represent an effective and long-lasting therapeutic solution.

References

A50
Lymphedema staging and surgical indications in geriatric age
C Campisi, C Campisi, S Accogli, C Campisi, F Boccardo
Department of Surgery, Unit of Lymphatic Surgery and Microsurgery, San Martino Hospital, University of Genoa, Italy
BMC Geriatrics 2010, 10(Suppl 1):A50

Background: Lymphedema, refractory to non-operative methods [1], may be managed by surgical treatment. Indications include insufficient lymphedema reduction by well performed medical and physical therapy (less than 50%), recurrent episodes of lymphangitis, intractable pain, worsening limb function, patient unsatisfied of the results obtained by non-operative methods and willing to proceed with surgical options. In this study Authors report a new lymphedema staging and their wide clinical experience in the microsurgical treatment of peripheral lymphedema [2,3] in geriatric age.

Materials and methods: More than 500 patients with peripheral lymphedema in geriatrics have been treated with microsurgical techniques. Derivative lymphatic micro-vascular procedures recognize today its most exemplary application in multiple lymphatic-venous anastomoses (LVA). In the case of associated venous disease reconstructive lymphatic microsurgery techniques have been developed. Objective assessment was undertaken by water volumetry and lymphoscintigraphy. Lymphedema staging is reported in Table 1.

Results: Subjective improvement was noted in 87% of patients. Objectively, volume changes showed a significant improvement in 83%, with an average reduction of 67% of the excess volume (Figure 1). Of those patients followed-up, 85% have been able to discontinue the use of conservative measures, with an average follow-up of more than 10 years and average reduction in excess volume of 69%. There was a 87% reduction in the incidence of cellulitis after microsurgery.

Conclusions: Microsurgical lymphatic-venous anastomoses have a place in the treatment of peripheral lymphedema in geriatrics especially in early stages, and should be the therapy of choice in patients who are not sufficiently responsive to nonsurgical treatment.

Table 1 (abstract A50)

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
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<tbody>
<tr>
<td>I</td>
<td><strong>Latent</strong> lymphedema, without clinical evidence of edema, but with impaired lymph transport capacity (provable by lymphoscintigraphy) and with initial immuno-histochemical alterations of lymph nodes, lymph vessels and extracellular matrix.</td>
</tr>
<tr>
<td>II</td>
<td><strong>Initial</strong> lymphedema, totally or partially decreasing by rest and draining position, with worsening impairment of lymph transport capacity and of immuno-histochemical alterations of lymph collectors, nodes and extracellular matrix.</td>
</tr>
<tr>
<td>III</td>
<td><strong>Increasing</strong> lymphedema, with vanishing lymph transport capacity, relapsing lymphangitic attacks, fibroinudative skin changes, and developing disability.</td>
</tr>
<tr>
<td></td>
<td><strong>Column shaped</strong> limb fibrolymphedema, with lymphostatic skin changes, suppressed lymph transport capacity and worsening disability.</td>
</tr>
<tr>
<td></td>
<td><strong>Properly called “elephantiasis”,</strong> with scleroindurative pachydermitis, papillomatous lymphostatic verrucosis, no lymph transport capacity and life-threatening disability.</td>
</tr>
<tr>
<td></td>
<td><strong>Extreme elephantiasis</strong> with total disability.</td>
</tr>
</tbody>
</table>

Figure 2 (abstract A49). Obesity and lymphedema: an example of successful outcome of the combined therapeutical non-operative and microsurgical approaches, after.
The incidence of TE events in IBD patients is higher than in mbo-embolic risk, especially in the mapping). We randomized our 1 year results of a comprehensive exami. We have observed a minor incidence of venous thromboembolism (VTE) in inflammatory bowel disease (IBD). As for other pathologies, the pathogenesis of thromboembolism in inflammatory bowel disease is still debated. The main reason for this is the hypercoagulable state [3,4].

**Materials and methods:** We performed a 3 year study on 71 patients with IBD, evaluating hypercoagulability, and then we compared the results of 71 patients non IBD group control. We also investigated patients of both groups concerning TE events occurred already.

**Results:** In IBD group we found out that 16 patients (22.5%) had a history of TE events versus 1% of group control. 48 (67%) had increased markers value versus less then 6% detected in group control. In IBD group 43%, 20% and 4% had respectively 1, 1-3 or >3 markers higher levels then normal range. Among the markers investigated, we detected increased levels of plated in 33%, homocysteine in 26.7%, d-dimero 25.3%, c3 in 15.4%, apcr in 5.6%.

**Conclusions:** From our study we detected a higher incidence of TE events, and hypercoagulating status in IBD group. In our previous investigations, plated, homocysteine, d-dimero, c3, and apcr, seemed to be the TE markers with higher sensitivity. It seems reasonable, according our experience, to propose a new TE risk score index for IBD patients: low, mild and high risk respectively for patients with 1, 1-3 and >3 markers with higher serum levels then normal range.

**References**

**Figure 1 (abstract A50). Breast cancer related lymphedema before (A) and long term after (C) microsurgical lymphatic-venous anastomoses (B).**

**A51**

**Thromboembolic tendency (TE) in IBD (inflammatory bowel disease) patients**

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BMC Geriatrics 2010, 10(Suppl 1):A51

**Background:** The incidence of TE events in IBD patients is higher than in population control [1,2]. The main reason for this, is the hypercoagulable state [3,4].

**Materials and methods:** We performed a 3 year study on 71 patients with IBD, evaluating hypercoagulability, and then we compared the results of 71 patients non IBD group control. We also investigated patients of both groups concerning TE events occurred already.

**Results:** In IBD group we found out that 16 patients (22.5%) had a history of TE events versus >1% of group control. 19 of them, already had knowledge of their previous hypercoagulating condition.

48 (67%) had increased markers value versus less then 6% detected in group control.

In IBD group 43%, 20% and 4% had respectively 1, 1-3 or >3 markers higher levels then normal range.

Among the markers investigated, we detected increased levels of plated in 33%, homocysteine in 26.7%, d-dimero 25.3%, c3 in 15.4%, apcr in 5.6%.

**Conclusions:** From our study we detected a higher incidence of TE events, and hypercoagulating status in IBD group. In our previous investigations, plated, homocysteine, d-dimero, c3, and apcr, seemed to be the TE markers with higher sensitivity. It seems reasonable, according our experience, to propose a new TE risk score index for IBD patients: low, mild and high risk respectively for patients with 1, 1-3 and >3 markers with higher serum levels then normal range.

**References**
Till not many years ago, the recommended treatment for laryngeal cancer survival was clinical treatment of radiotherapy tissue damage by concomitant CT-RT. From January 2003 to September 2009, 18 hypopharyngeal cancer patients were treated with a combined therapeutic approach including Piezo-Surgery (Vespro, 129. 90127, Palermo, Italy) and lipofilling at the Department of Plastic and Reconstructive Surgery of the University Hospital of Palermo. A53

Background: Till not many years ago, the recommended treatment for advanced laryngeal cancer was a total laryngectomy followed by adjuvant radiation therapy. Studies conducted from 1980's have broadened the therapeutic options, in the attempt to cure the cancer while sparing laryngeal functions. Functional surgery and a combination of chemotherapy (CT) and radiotherapy (RT) appears to be able to reach these objectives. We analyzed the case series of patients with laryngeal-hypopharyngeal cancer observed in the period 1999-2006 to evaluate the results on the basis of the proposed treatment, focusing in particular on advanced-stage cancer.

Materials and methods: 146 patients were observed, of which 137 were analyzed; 113 patients were operated, while 24 had non-surgical treatment: 12 of these had a CT-RT protocol with induction CT followed by concomitant CT-RT.

Results: After surgery in advanced-stage laryngeal cancer survival was 82% at 18 months, and 36% at 5 years, while after CT-RT protocol was 60% at 18 months. There was a statistically relevant advantage in the surgery group (P = 0.02). For what concerns advanced-stage hypopharyngeal cancer, survival observed was 60% at 3 years (48% at 5 years) in the surgery group, and 62% at 3 years in the CT-RT group, without difference at the log-rank test (P = 0.79).

Conclusions: In our case history, surgery had a better outcome than CT-RT in advanced-stage larynx cancer, even if we analyzed small groups of patients. These data need to be confirmed by larger case series; the advancements in surgery, chemotherapy and radiotherapy have furthermore to be held in due consideration, since they are opening interesting perspectives in the treatment of advanced-stage larynx cancer.

A53
Larynx organ preservation in subjects with hypopharynx-larynx cancer

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BMC Geriatrics 2010, 10(Suppl 1):A53

Background: The risk of osteonecrosis associated with bisphosphonates is particularly high with denosumab. Aims: To evaluate the efficacy and safety of a new therapeutic approach, the use of piezoelectric surgery for the management of patients with osteonecrosis.

Materials and methods: Between 2005 and 2009, 50 patients have been treated with the lipofilling technique at the Department of Plastic and Reconstructive Surgery of the University Hospital of Palermo. Ages ranged between 23 and 59 (mean 40). 10 patients were males and 40 females. In all cases the Coleman technique has been used. The fat harvested by liposuction was centrifuged at 3000 rpm for 5 minutes for purification. In 45 cases lipofilling was used to rejuvenate the skin envelope in 2 surgical stages. In 3 cases for hand rejuvenation in one stage.

Results: A consistent improvement in skin quality has been obtained both in the face and in the hands, together with restoration of normal contour and improvement in skin elasticity and colour with satisfactory cosmetic outcomes in all patients. Fat resorption was observed to vary between approximately 20 and 40% depending on the defect to be corrected and on the degree of skin aging. Oedema, bruising and hematoma are the sequelae that ensue on the early postoperative period and resolve within 4 weeks, either spontaneously or with the aid of bioflavonoids or Arnica.

Conclusions: Lipofilling can be considered a useful adjunct in skin rejuvenation of the face and body and is also an ideal material to model, improve and regenerate tissues with the added value of regenerative, rather than only filling, properties.

Reference

A54
Regenerative potential of lipofilling on skin aging

A Cordova1, C Lusia, P Piretto

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BMC Geriatrics 2010, 10(Suppl 1):A54

Background: Several studies have proved that the vascular-stromal component of adipose tissue is a rich reserve of regenerative cell precursors able to release angiogenic and antiapoptotic growth factors that stimulate cell differentiation [1]. Thanks to the presence of stromal stem cells, the adipose tissue can now be considered an ideal biologic product to bio stimulate and correct defects of the face and body. The authors present their experience with the application of lipofilling to rejuvenate the skin envelope of the face and the hands.

Materials and methods: Between 2005 and 2009, 50 patients have been treated with the lipofilling technique at the Department of Plastic and Reconstructive Surgery of the University Hospital of Palermo. Ages ranged between 23 and 59 (mean 40). 10 patients were males and 40 females. In all cases the Coleman technique has been used. The fat harvested by liposuction was centrifuged at 3000 rpm for 5 minutes for purification. In 45 cases lipofilling was used to rejuvenate the skin envelope in 2 surgical stages. In 3 cases for hand rejuvenation in one stage.

Results: A consistent improvement in skin quality has been obtained both in the face and in the hands, together with restoration of normal contour and improvement in skin elasticity and colour with satisfactory cosmetic outcomes in all patients. Fat resorption was observed to vary between approximately 20 and 40% depending on the defect to be corrected and on the degree of skin aging. Oedema, bruising and hematoma are the sequelae that ensue on the early postoperative period and resolve within 4 weeks, either spontaneously or with the aid of bioflavonoids or Arnica.

Conclusions: Lipofilling can be considered a useful adjunct in skin rejuvenation of the face and body and is also an ideal material to model, improve and regenerate tissues with the added value of regenerative, rather than only filling, properties.

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A54
Regenerative potential of lipofilling on skin aging

A Cordova1, C Lusia, P Piretto

Cattedra di Chirurgia Plastica e Ricostitutiva, Dipartimento di Discipline Chirurgiche ed Oncologiche, Università degli Studi di Palermo. Via del Vespro, 129. 90127, Palermo, Italy

BMC Geriatrics 2010, 10(Suppl 1):A54

Background: Features of skin aging are progressive cell and extracellular matrix atrophy. Subcutaneous fat plays a key role in it. Recent studies

have proved that the vascular-stromal component of adipose tissue is a rich reserve of regenerative cell precursors able to release angiogenic and antiapoptotic growth factors that stimulate cell differentiation [1]. Thanks to the presence of stromal stem cells, the adipose tissue can now be considered an ideal biologic product to bio stimulate and correct defects of the face and body. The authors present their experience with the application of lipofilling to rejuvenate the skin envelope of the face and the hands.

Materials and methods: Between 2005 and 2009, 50 patients have been treated with the lipofilling technique at the Department of Plastic and Reconstructive Surgery of the University Hospital of Palermo. Ages ranged between 23 and 59 (mean 40). 10 patients were males and 40 females. In all cases the Coleman technique has been used. The fat harvested by liposuction was centrifuged at 3000 rpm for 5 minutes for purification. In 45 cases lipofilling was used to rejuvenate the skin envelope in 2 surgical stages. In 3 cases for hand rejuvenation in one stage.

Results: A consistent improvement in skin quality has been obtained both in the face and in the hands, together with restoration of normal contour and improvement in skin elasticity and colour with satisfactory cosmetic outcomes in all patients. Fat resorption was observed to vary between approximately 20 and 40% depending on the defect to be corrected and on the degree of skin aging. Oedema, bruising and hematoma are the sequelae that ensue on the early postoperative period and resolve within 4 weeks, either spontaneously or with the aid of bioflavonoids or Arnica.

Conclusions: Lipofilling can be considered a useful adjunct in skin rejuvenation of the face and body and is also an ideal material to model, improve, repair and regenerate tissues with the added value of regenerative, rather than only filling, properties.

Reference
Results: The results are indicated in Table 2: in 4 patients the results aren’t satisfactory; 10 patients are stationary; 3 patients improved (Figure 1); 1 patient has completely recovered (Figure 2).

Conclusions: PiezoSurgery carried out a clinical improvement of patients for its biostimulation effects.

References

Table 2 (abstract A55)

<table>
<thead>
<tr>
<th>Patients Number</th>
<th>Initial Stage</th>
<th>Final Stage</th>
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<td>*IIa</td>
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<td>*IIa</td>
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<td>^1</td>
<td>^IIa</td>
<td>^IIb</td>
</tr>
<tr>
<td>^2</td>
<td>^IIa</td>
<td>^IIb</td>
</tr>
<tr>
<td>+1</td>
<td>+IIa</td>
<td>+0</td>
</tr>
</tbody>
</table>

* n. 10 clinical condition
# n. 4 worsened
^n. 3 improved
+n. 1 clinically free from Disease

Background: Abstract Objective. The use of bisphosphonates (zoledronic acid) in the treatment of metastatic bone disease and osteoporosis has been raised during recent years. The purpose of this treatment is mainly to reduce skeletal-related events, e.g. pain and pathological fractures. Bisphosphonate-related osteonecrosis of the jaw (BRONJ) adversely affects the quality of life, producing significant morbidity in afflicted patients. BRONJ can develop spontaneously or after minor trauma. In general, these patients seem to have less severe manifestations of necrosis and respond more readily to stage-specific treatment regimens (Table 1). Strategies for the treatment of patients with, or at risk of, BRONJ we reset forth in the American Association of Oral and Maxillofacial Surgeons (AAOMS) Position Paper on Bisphosphonate-Related Osteonecrosis of the Jaws (Position Paper) and approved by the Board of Trustees in September 2006(1). This update contains revisions to the diagnosis and staging and management strategies and highlights the status of basic science research. We to report the incidence of bisphosphonate-related osteonecrosis of the jaw (ONJ), since the initiation of a routine maxillofacial examination before treatment with bisphosphonates, no ONJ has been seen.

Conclusions: ONJ is a rare but a very serious complication in relation to treatment with bisphosphonates. To decrease the incidence of ONJ, a maxillofacial examination could be performed in all patients before treatment with bisphosphonates.

Reference
Table 1 (abstract A56). Staging and treatment strategies

<table>
<thead>
<tr>
<th>BRONJ* Stage</th>
<th>Description</th>
<th>Treatment Strategies†‡§</th>
</tr>
</thead>
<tbody>
<tr>
<td>At risk category</td>
<td>No apparent necrotic bone in patients who have been treated with either oral or IV bisphosphonates</td>
<td>No treatment indicated Patient education</td>
</tr>
<tr>
<td>Stage 0</td>
<td>No clinical evidence of necrotic bone, but nonspecific clinical findings and symptoms</td>
<td>Systemic management, including use of pain medication and antibiotics</td>
</tr>
<tr>
<td>Stage 1</td>
<td>Exposed and necrotic bone in asymptomatic patients without evidence of infection</td>
<td>Antibacterial mouth rinse Clinical follow-up on quarterly basis Patient education and review of indications for continued bisphosphonate therapy</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Exposed and necrotic bone associated with infection as evidenced by pain and erythema in region of exposed bone with or without purulent drainage</td>
<td>Symptomatic treatment with oral antibiotics Oral antibacterial mouth rinse Pain control Superficial debridement to relieve soft tissue irritation</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Exposed and necrotic bone in patients with pain, infection, and one or more of the following: exposed and necrotic bone extending beyond the region of alveolar bone, (ie, inferior border and ramus in the mandible, maxillary sinus and zygoma in the maxilla) resulting in pathologic fracture, extraoral fistula, oral antral/oral nasal communication, or osteolysis extending to the inferior border of the mandible or the sinus floor</td>
<td>Antibacterial mouth rinse Antibiotic therapy and pain control Surgical debridement/resection for longer term palliation of infection and pain</td>
</tr>
</tbody>
</table>

Abbreviations: BRONJ, bisphosphonate-related osteonecrosis of the jaw; IV, intravenous.

†Regardless of disease stage, mobile segments of bony sequestrum should be removed without exposing uninvolved bone; extraction of symptomatic teeth within exposed, necrotic bone should be considered because it is unlikely that extraction will exacerbate established necrotic process.

‡Discontinuation of IV bisphosphonates has shown no short-term benefit. However, if systemic conditions permit, long-term discontinuation might be beneficial in stabilizing established sites of BRONJ, reducing risk of new site development, and reducing clinical symptoms. Risks and benefits of continuing bisphosphonate therapy should be made only by treating oncologist in consultation with oral and maxillofacial surgeon and patient.

§Discontinuation of oral bisphosphonate therapy in patients with BRONJ has been associated with gradual improvement in clinical disease. Discontinuation of oral bisphosphonates for 6-12 months may result in either spontaneous sequestration or resolution after debridement surgery. If systemic conditions permit, modification or cessation of oral bisphosphonate therapy should be done in consultation with treating physician and patient.

A57
Treatment of abdominal aorta aneurysms
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BMC Geriatrics 2010, 10(Suppl 1):A57

Background: The best treatment of abdominal aorta aneurysms of the segments below the emergency of the renal arteries are still under discussion. In literature there are several studies that compare the retroperitoneal (R.P.) approach with the transperitoneal (T.P.) one or that suggest their possible variations. The R.P. approach offers the possibility of treating patients with hostile abdomen (former laparotomic surgery, obesity or in a state of chronic respiratory insufficiency); it allows for a better exposure of the over and infra-renal abdominal aorta segments and most of all it is characterised by a better post surgery period associated with a lower number of post-operative complications with a faster restart of the intestinal functions and with shorter hospitalization.

Materials and methods: From 1996 and 2008, 686 planned surgical treatments of the subrenal abdominal aorta have been performed. All the anamnestic, surgical and anaesthesiological data concerning all the treated patients have been collected in an electronic database. The follow-up has been carried out through phone interviews and clinical examinations, within our vascular O.U.

220 patients underwent endovascular treatment, 170 underwent surgical treatment with T.P. approach (group A) and 296 through R.P. or left lombotomic approach (group B). The patients treated in emergency or through endovascular procedures have been excluded by our study.

The T.P. group (group A) is made up by 170 patients, while the R.P. (group B) by 296 patients. The average follow-up lasts 66 months for group A and 72 for group B. Our study has not showed statistically significant differences between the two groups in relation with age, sex, aneurysm dimensions, the presence of risk factors and possible association with hypertension, coronary disease, COBP, hyperlipidemia, diabetes, chronic kidney failure, smoke addiction, while there is a significant statistical difference between the two groups regarding obesity which is more frequent in group B. Also in our study the post surgery period of the patients treated with the R.P. approach was characterized by a faster restart of evacuation, and such a difference was statistically significant. Such a result was due to the fact that the R.P. approach did not request the opening of the peritoneum therefore reducing the damage of intestinal homeostasis.

Results and conclusions: The number of patients admitted to the intensive care unit after surgery was significantly lower in group A. Anyway the length of admission in the intensive care unit was comparable in the two groups. Moreover the patients of group B did not have statistically shorter hospitalization showing a faster restart of autonomy than the patients of group B.

The percentage of death cases within 30 days and 2 years from surgical treatment were higher in the T.P. group, such a difference was not statistically higher in group B. Our study underlined that the R.P. approach was associated with better results in terms of post surgery complications, length of admission and long term survival. Consequently this method is a first choice in our O.U. for the planned treatment of AAA.

A58
Rationale for a clinical classification of lymphedema
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1Department of Surgery, Anesthesiological and Radiological Sciences, University of Ferrara, Italy; 2S. Giovanni Battista Hospital, Rome, Italy; 3Departmento of Angiologica St. Giovanni Addolorata, Rome, Italy; 4Istituto Universitario Delle Cliniche, Ancona, Italy
BMC Geriatrics 2010, 10(Suppl 1):A58

Background: From a physical, functional and psychological point of view, lymphedema is a chronic, progressive and debilitating disease. For this reason it requires targeted intervention, an early diagnosis and long term follow-up.
Most of the existing classifications are not practical as they are only partial, taking into consideration just one aspect of the disease and are unsuitable for the re-stadiation of lymphedema. We propose an easily applicable and reproducible method for classifying lymphedema which gathers all the important information on the clinical evolution of the disease including a description of its pathophysiology.

Materials and methods: Between 2002 and 2007, 175 patients with lymphedema of one or more limbs were assessed. Particular attention was paid to past medical history (infections, traumas, medication and past surgery) ruling out lymphedemas caused by angiodysplastic syndromes. The physical examination included inspection and palpation of the affected limb(s). We also focused on a careful examination of the skin of the affected limb, searching for changes in skin texture, pitting, hyperkeratosis, fibrosis, infection and elephantiasis, also searching for the presence of the Stemmers sign. In addition, palpation of the affected limb aided in the assessment of spontaneous or evoked pain while palpation of the lymph nodal station of the affected limb was performed to check for signs of lymphadenopathy. Ultrasound represents a non invasive examination for the evaluation of a swollen limb.

Lymphoscintigraphy provides information on the function of the lymphatic vessels, contributes to the differential diagnosis among the causes of limb edema and evaluates treatment results. In order to obtain a lymphedema classification based on the clinical, ethological, anatomical and pathophysiological information obtained, we attempted to reclassify in the same format as the CEAP for venous disorders. In fact, we utilized the acronym C.E.A.P. by adding the letter L to highlight the "lymphedema" aspect.

Conclusions: The aim of this classification is to provide a comprehensive and descriptive classification that can be globally adopted. During the experimental phase, the objective data obtained provided an accurate description of the abnormalities and facilitated the follow-up of these patients during this period also allowing the re-stadiation of the disease after a period of treatment or in case of worsening of the disease. We found that it is characterized by an easy applicability since it is based on objective findings obtained by the instrumental tests and does not face the difficulty of dealing with definitions of clinical items as in the C.E.A.P classification for the chronic venous insufficiency.

A59

The buccal fat pad in reconstruction of malignant lesions of the oral cavity: our experience on 31 cases

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Department of Maxillo-Facial Surgery (Head: Mario Giudice) - "Magna Graecia" University, Catanzaro, Italy

BMC Geriatrics 2010, 10(Suppl 1):A59

Background: The use of the Buccal Fat Pad (BFP) as a pedicled graft in the closure of intra-oral defects after oncolgical resections has gained in popularity, it is probably due to the ease of access, the rich blood supply and the low morbidity. The purpose of this study is to show our clinical experience and the results related to the use of the BFP in the repair selective malignant lesions of the oral cavity.

Material and methods: This study included a series of 31 patients, from January 2001 to January 2009, with BFP primary reconstruction after medium intraoral malignant lesions excision. After tumors excision, the BFP

Table 1 (abstract A59)

<table>
<thead>
<tr>
<th>Pz</th>
<th>Age</th>
<th>Site</th>
<th>Size (cm) max. diameters</th>
<th>Healing</th>
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<tr>
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<td>53</td>
<td>RMT</td>
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</tr>
<tr>
<td>71</td>
<td>HP+SP</td>
<td>5</td>
<td>DELAYED COMPLETE LOSS</td>
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<td>68</td>
<td>HP</td>
<td>4</td>
<td>APPROPRIATE</td>
<td>PARTIAL LOSS</td>
<td></td>
</tr>
</tbody>
</table>

HP: hard palate; sp: soft palate; bm: buccal mucosa; gb: gingivobuccal sulcus; rmt: retromolar tritone
was gently exposed in the region of the molars by blunt dissection with the goal of keeping the fascial envelope intact and to preserve BFP vascular supply. The graft is then sutured covering the defect margins by interrupted resorbable sutures (Figure 1). The success criterion was the complete epithelialization of the graft and the absence of the graft’s infection and fistulae occurrences. All the patients underwent primary closure of defects with the buccal fat pad. Four patients who underwent the operation also had adjuvant radiotherapy. Patients underwent one year follow-up.

Results: All intraoral defects were adequately repaired but there was partial loss of the BFP in one case and complete loss in another (Table 1). Patients with an uneventful immediate postoperative period had signs of BFP epithelialization by the end of the first week. One month later, most of the patients had the BFP replaced by a thin whitish streak covered by normal mucosa, with very minimal fibrosis. The mouth opening was satisfactory in 21 patients, including those who received adjuvant radiotherapy. The BFP was epithelialized within 3–4 weeks and no additional surgery was required (Figure 2).

Conclusions: In conclusion we consider the BFP an ideal choice for the reconstruction of medium intraoral defects especially in post-oncologic cases, where the morbidity and the failure rate of reconstruction must be very low. Even more radiotherapy if necessary, can begin early, due to fast epithelialization process.

References

Table 1 (abstract A60). (AAOMFS)

<table>
<thead>
<tr>
<th>Stage 0 (sub-clinic stage)</th>
<th>Stage I (bone-exposure without pain and infection)</th>
<th>Stage II (bone-exposure with pain and infection)</th>
<th>Stage III (bone-exposure &gt; 3 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a lesion &lt; 1 cm</td>
<td>b lesion &gt; 1 cm</td>
<td>a lesion &lt; 2 cm</td>
</tr>
</tbody>
</table>

In stage I treatment was performed with clorexidina 0.2%, in stage II or III antibiotic-therapy and clorexidina, in stage IIIb surgical therapy. In 18 pz we have associate PiezoSurgery system, which exploits the ultrasounds action, effective on the bone but absolutely atraumatic on the soft tissue.

Table 2 (abstract A60)

<table>
<thead>
<tr>
<th>Patients Number</th>
<th>Initial Stage</th>
<th>Final stage</th>
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</thead>
<tbody>
<tr>
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<td>1a</td>
</tr>
<tr>
<td>*10</td>
<td>1a</td>
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<td>*4</td>
<td>1IIa</td>
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<td>1IIIB</td>
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<td># 2</td>
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<td>#6</td>
<td>1IIa</td>
<td>1IIa</td>
</tr>
<tr>
<td># 2</td>
<td>1IIb</td>
<td>1IIb</td>
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</tr>
<tr>
<td>+1</td>
<td>1IIa</td>
<td>+0</td>
</tr>
</tbody>
</table>

*n. 26 clinical condition stationary
^n. 10 worsened
^n. 17 improved
^+n. 3 clinically free from disease

Patients can remain asymptomatic even for a long time, but secondary infection of the bone exposed due to teeth extraction or other surgical procedures cause pain (2), soft tissue swelling, purulent collections that can drain in the mouth or outside.

Materials and methods: In Department of Maxillo-Facial Surgery, from January 2003 to September 2009, it has been observed 84 patients with ONJ. 56 are included in our screening program: 50 patients were treated for cancer with acid Zolendronic, 6 for osteoporosis with Alendronic acid; the ONJ location was in the 24 pz (43%) the upper jaw, in 30 (54%) the mandible, in 2 (3%) both. ONJ developed in 31 pz (54%) after tooth extraction, in 15 (28%) due to dental prostheses.

Conclusions: To date management of ONJ patients is difficult for the prognosis and therapy, especially for several cases.
Background: Advanced skin carcinoma, according to TNM classification, is as a lesion in stage III or IV (T3-T4, N0-N1, M0-M1) greater than 5 cm in greatest diameter (T3). It can infiltrate extradermal tissues (T4) or it can have local lymph node metastasis (N1) or distant metastasis (M1). In a large percentage of these patients, local relapses with deep infiltration, regional lymph node metastasis or distant metastases may be encountered.

Current literature reports only few papers about advanced stage casistics. Therefore we reviewed our experience with elderly patients presenting skin carcinomas in advanced stage, to evaluate the incidence of this disorder among the whole number of skin carcinomas, the operability of those patients, the immediate clinical response to the surgical treatment and their follow-up.

Materials and methods: From January 1st 2005 to June 30th 2009 we observed and treated 412 patients with skin carcinomas. Only patients with confirmed histopathological diagnosis of skin carcinoma were included in the study. The advanced stage of disease was established by physical examination and instrumental imaging exams.

Results: The more frequent diagnoses were basal cell carcinomas, squamous cell carcinoma and porocarcinoma.
Among this group, we found 37 advanced stage carcinomas (T3-T4), that is 8.98% of patients with skin carcinoma.

All patients were over 75 years old with median age of 81 years (range 75-88). Most patients presented systemic disorders. Thirty six out of 37 patients were surgically operated. Only one was not operated because of his severe heart failure. In all patients within 1 month from the surgical operation, all surgical flaps and grafts were well nourished. One year later only 24 patients came to the check-up and all of them were alive and without any tumor relapse.

Conclusions: Our percentage of advanced stage skin carcinomas in elderly people (8.9%) is particularly notable in comparison with other casistics reported in the literature that commonly present a percentage of about 3% [1-4]. We must take into account that our Institute is sited in the center of Calabria, a region of Southern Italy quite homogeneous for population and lifestyle. Many inhabitants are old and with a history of working as fishermen or farmers and consequently exposed for long periods to the sun rays.

References

A62
Hemangiomas and laser therapy: clinical experience
A Greto Cirico, M Bonella, T Vitagliano, M A Fiorillo, D Novembre, M Greco Department of Plastic Surgery, “Univeristy Magna Graecia”, Catanzaro, 88100, Italy
BMC Geriatrics 2010, 10(Suppl 1):A62

Background: Hemangiomas are common benign vascular tumors characterized by a proliferative growth phase followed by very slow and inevitable regression. They are classified as capillary, cavernous, and mixed lesions, 60% are localized on the head and neck but they can be found in all regions of the body. Most of the lesions are focal and solitary, while 15%-20% are multiple with involvement of extracutaneous sites. Although hemangioma is usually benign, its growth is very unpredictable, due to uncontrollable endothelial cell proliferation, and complications are frequent because hemangiomas can evolve in ulceration. We present our clinical experience on the role of lasers to treat port wine stains, superficial hemangiomas, and café au lait macules.

Material and methods: Literature 1 reports many treatment modalities including surgery, drug therapy, sclerotherapy, cryotherapy, laser therapy, and surgical therapy. There still exist many controversies over the optimal treatment options for individual patient. Between 2005 and 2009 we used different types of laser therapy, indicated in proliferative hemangiomas, to treat 103 patients. The flash lamp pulsed dye laser (585 nm) has been used successfully in ulcerated lesions. The Nd:YAG laser (1060 nm) 2, which penetrates deeper in the tissues, produce considerable scarring. Scarring appears to be less with a tunable dye laser (577 nm).

Results: After 6 months of follow-up from the first session of laser treatment, total resolution was obtained in 72 patients. A second or third session followed in 29 patients in which, the initial results were good, moderate, or poor. Two patients refused refused the second session. Complications were seen in nine patients. One patient had postoperative bleeding which stopped spontaneously, while atrophic scars occurred in six patients, and hypertrophic scars in two patients.

Conclusions: Nd:YAG laser irradiation produces good cosmetic results for the treatment of cutaneous hemangiomas. Best results are obtained if patient epidermis are ice protected. That decreases the number of sessions for treatment of these lesions.

References

A63
Sacral neuromodulation in sphincteric disorders
A Lavano Neurosurgical Department, University “Magna Graecia” of Catanzaro, Italy
BMC Geriatrics 2010, 10(Suppl 1):A63

Background: Various neurological pathologies can interest the inferior urinary tract determining bladder dysfunctions of two types: a) dysfunctions of the phase of filling: detrusorial hyperactivity and urethral hypoactivity that cause urinary urge-incontinence, b) dysfunctions of the phase of emptying: detrusorial hypoactivity and urethral hyperactivity that cause urinary retention or difficulty of emptying. Neurogenic low urinary tract dysfunctions unresponsive to medical and conservative therapy are difficult to manage. Nowadays they can be treated with Sacral Nerve Stimulation (SNS), even if clinical experiences reported in literature are still limited.

Materials and methods: SNS is performed by means of a stimulation system of the sacral nerves (S3). A quadripolar electrode is implanted bilaterally in S3 foramen and a peripheral nerve evaluation test is performed; if a positive response is obtained (improvement < 50%) the electrode is connected to a subcutaneously-placed pulse generator. We performed SNS in 6 patients with neurogenic bladder: 3 patients had incontinence-urgency and 3 patients had urinary retention.

Results: Among cases with incontinence-urgency we achieved complete control of the bladder in 2 patients while in 1 number of the urinary losses was reduced by 80%. In 2 patients with urinary retention we obtained complete recovery of the bladder function, while in 1 number of the catherisims/die was reduced by 50%, the urinary volume for micturion was increased and residual urinary volume was decreased. Results stay unchanged during the follow-up (maximum 26 months), except for one patient in which a partial loss of effectiveness occurred.

Conclusions: Chronic electric stimulation of S3 sacral roots via an implanted neuroprotesis is therefore an effective, safe and promising therapeutic option in the treatment of neurogenic bladder dysfunctions.

Reference

A64
VEGF F as a biological marker of the venous disease-associated ulcers natural history in the elderly: preliminary data
C Longo 1, F Renna 1, D Mastrangelo 1, S de Franciscis 1,2
1PhD Programme in Clinical and Experimental Biotechnology in Vein and Lymphatics Disease; 2Department of General Surgery, University of Catanzaro, Catanzaro, Italy
BMC Geriatrics 2010, 10(Suppl 1):A64

Background: Vascular Endothelial Growth Factor A (VEGF A) expression correlated both temporally and spatially with the proliferation of new blood vessels that differ from normal blood vessels with respect to organization, structure, and function [1]. The aim of our study was to measure plasma and wound fluid VEGF levels to investigate the role of this angiogenic factor as a possible marker of leg ulcers healing in patients with chronic venous disease.

Material and methods: Design: Analysis of a prospective collected database. Setting: Vascular Surgery Unit in an University Hospital. Patients: A total of 37 patients aged >65. Study Group: 17 patients affected by venous leg ulcers (CEAP 6; at least from 4 weeks and not over 24 months); Control Group: 20 persons with no clinical evidence of venous or arterial disease of the lower limb. Data collection: main
demographic and laboratory parameters were collected for all patients. Study Group: plasma and wound fluid sample for VEGF A164/5 dosage (ELISA assay), together with wound dimension recording were performed at specific time-points: baseline measurement, at inclusion (T0); 4 weeks after inclusion (T1) and 8 weeks after inclusion (T2). Control Group: a single plasma sample was performed at T0.

Results: No differences in main demographic and laboratory parameters (p = NS for all measurements). At baseline the median plasma VEGF levels (pg/ml) were significantly higher in patients (98 pg/ml) than controls (54 pg/ml): median difference vs. controls (95% CI) 35 (9–63). No significance was found in patients between plasma VEGF levels and ulcer size (p = 0.179 at T0; p = 0.212 at T1; p = 0.862 at T2). VEGF concentration in wound fluid showed a statistically significant correlation with the wound area (cm²) (p = 0.019 at T1; p = 0.028 at T2).

Conclusions: Our results show that the VEGF165 level detected in wound fluid can be of prognostic value for differentiating an effective or impaired wound healing response while the difference observed in VEGF plasma levels need further investigations.

Reference
Results: Our data about wound healing, compared to results of previous cases of vulvar recurrence treated by our department, immediately showed a reduction of complications, early healing and patient mobilization with less hospital stay, minimizing the costs. Other advantages of this new technique are the facility of application, no influence on operative time and low cost.

Conclusions: In consideration of the most frequent complications that are reported after surgical treatment of vulvar recurrence, as difficult and longer healing due to frequent necrosis and breakdown of wounds, we had experimented with the use of platelet gel [3]. In fact, thanks to its properties of regenerating and repairing tissues, platelet gel is being used ever more frequently in reconstructive surgery [4]. The biological properties of platelet gel are basically due to the high concentrations of growth factors (GF) [4].

References

A68
The use of a dermal substitute and thin skin graft in the cure of lower limbs wounds from vasculitis: observational study
V Padovano Sorrentino 1, A Della Corte, F Campitiello, F Freda, P Petronella, S Canonico
Department of Gerontology, Geriatrics and Metabolic Diseases, Second University of Naples, Naples, Italy
BMC Geriatrics 2010, 10(Suppl 1):A68

Background: In patients with lower limbs wounds from vasculitis reconstructive surgery with skin grafts can be considered, but this treatment likely fails because of the position, width, and depth of the lesion(s). In these patients a new therapeutic prospect is the use of a dermal matrix that stimulates the production of endogenous collagen before repair with skin graft autografting.

Integra® is a semibiological implant consisting of a two-layered membrane that produces a histo-inductive and histo-conductive action on mesenchyme, leading to the formation of normal derma.

Materials and methods: This observational study enrolled six over 65 years old patients with vasculitis and leg ulcers dating at least 1 years. All ulcers, for a total of 39 lesions, were very painful. After surgical debridement of the wounds, the dermal matrix was modelled and applied. After 21 days, the attachment of the artificial dermis was tested, the patients were re-admitted for thin skin grafting.

Results: In all patients, at the first follow-up, a notable reduction in pain, exudates and perilesional edema was ascertained. After 2 weeks, progressive substitution of granulation tissue with new yellow gold derma became evident in all the patients. After 21 days, the dermal matrix was completely integrated with the guest tissue. In 5 patients, attachment of the skin graft was complete, and in one patient, it was partial but nevertheless superior for 80% of the surface. Even in this case, complete healing of the lesions was achieved within 4 weeks at most. All patients were checked for a minimum of 6 months, and none suffered an ulcerous recurrence.

Discussion: In our series, Integra® allowed for the complete refilling of the loss of tissue, the rapid disappearance of pain, and the rapid regeneration of a permanent dermis (Figure 1).

Reference

A69
Wound bed preparation with NPWT in diabetic foot ulcers: case report
V Padovano Sorrentino 1, A Della Corte, F Campitiello, F Freda, P Petronella, S Canonico
Department of Gerontology, Geriatrics and Metabolic Diseases, Second University of Naples, Italy
BMC Geriatrics 2010, 10(Suppl 1):A69

Background: Negative Pressure Wound Therapy (NPWT) is primarily used for very complex chronic wounds. The surgical treatment of the diabetic wounds with loss of soft tissue usually consists of closure using split-thickness skin grafts or transposition flaps. However, the first step consists of standard wound care with moist gauze dressing with the aim to prepare the wound bed for final closure. Clinical and experimental studies reported that negative pressure increases local blood flow and decreases bacterial colonization. Localized negative pressure removes fluids from the wound and promotes the granulation tissue, which is required for wound closure.

Figure 1 (abstract A68), (Clinical Case).
Materials and methods: A 68 years old man, with diabetes and peripheral neuropathy but without vascular dysfunctions was observed in our outpatient service in consequence of a traumatic wound of left foot with exposed bones and tendons. Antibiotic drugs were provided and NPWT was applied for three weeks. During this period, an increase of granulation tissue and decrease of nonviable tissue were observed. After this period, amputation of third, fourth and fifth left toe were performed because of bone necrosis. He continued NPWT for 2 weeks until complete granulation of the wound bed, and subsequently the wound was closed with a thin skin graft (Figure 1).

Results: NPWT achieved a faster granulating wound bed in order to prepare it for surgical closure technique.

Discussion: NPWT reduces wound surface area by the traction force of negative pressure which increases mitosis of tissue around the wound. Faster wound healing during the treatment of diabetic foot ulcers may decrease hospital stay and prevent extensive surgery for wound closure. NPWT can improve therapeutic results, major amputations being avoided.

Reference

A70
Laparoscopic approach to early stage endometrial cancer: is needed further evidence?
S Palomba1*, A Falbo2, T Russo2, F Piccione3, M Biamonte2, M Rocca1, F Zullo1,2
1Department of Gynecology & Obstetrics, University “Magna Graecia” of Catanzaro, Italy; 2Gynecologic Oncology Unit, Cancer Center of Excellence “Tommaso Campanella” of Germinato, Catanzaro, Italy; 3BMC Geriatrics 2010, 10(Suppl 1):A70

Background: A recent meta-analysis of randomized controlled trials (RCTs) showed that laparoscopic approach to endometrial cancer was effective in terms of overall, disease-free and cancer-related survival [1]. The aim of the current study was to update until September 2009 data from RCTs evaluating the effects of laparoscopic approach to endometrial cancer.

Materials and methods: Meta-analysis of randomized controlled trials (RCTs). Efficacy and safety data were evaluated.

Results: Three RCTs evaluating the efficacy and safety outcomes of laparoscopic surgery to treat early stage endometrial cancer were identified and included in the final analysis. No significant difference in intra-operative complications (OR = 1.5, 95%CI 0.7 to 3.5, P = 0.442) was observed between laparoscopic and laparotomic approach to early stage endometrial cancer. Conversely, significant advantage in terms of post-operative complications (OR = 0.5, 95%CI 0.3 to 0.8, P = 0.008) were reported after laparoscopic surgery in comparison with laparotomic. A significantly longer operative time was observed for the laparoscopic procedure than for the laparotomic one (OR = 35.6, 95%CI 1.9 to 69.3, P = 0.038), even if a significant (P < 0.001) heterogeneity was present across the analyzed studies. On the other hand, the intra-operative blood loss was significantly lower in patients treated with laparoscopy than in those treated with laparotomy (OR = –214.1, 95%CI –303.8 to –124.4, P < 0.001), even if a significant (P < 0.001) heterogeneity was again present across the analyzed studies. Pelvic nodes yield resulted similar between two surgical approaches (OR = 1.0, 95%CI –0.3 to 2.4, P = 0.134), whereas the para-aortic nodes yield was significantly higher after laparoscopic surgery (OR = –100.5, 95%CI –108.4 to 2.4, P = 0.134).

Conclusions: Both laparoscopy and laparotomy are two effective approaches for treating patients with early stage endometrial cancer. No significant difference between laparoscopic and laparotomic approach to endometrial cancer in overall (odds ratio (OR) = 0.96, 95% confidence index (CI) 0.51 to 1.81, P = 0.976) survival was observed (Figure 1). Disease-free (OR = 0.95, 95% CI 0.51 to 1.80, P = 0.986) and cancer-related (OR = 0.91, 95% CI 0.27 to 3.06, P = 0.883) survival has been demonstrated to be not different between two surgical approaches. No significant heterogeneity was observed between studies in any efficacy outcome evaluated.

Reference
A71
Role of a medication in polyurethane foam in the treatment of diabetic foot lesions
F P Palumbo1,2, S Serantoni3, M Pera3, E Bonafede1, M Mangiapane1, B Cudia1, G Diana1
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BMC Geriatrics 2010, 10(Suppl 1):A71

Background: The treatment of diabetic foot lesions need medications capable of managing wound infection and exudates that, variously combined, can influence the natural history of the pathology and therefore limb survival. A particular and economic device, is represented by honeycomb structure polyurethane foam Ligasano ©.

Material and methods: We evaluated 5 patients with a diabetic foot and a case history of infected wounds until flemmone. The lesions have been debrided and/or surgically drained and then medicated three time a week, with variable thickness Ligasano (0.5 and 1 cm). Tissue sample was collected to perform culture and antibiogram. According to diabetic foot guidelines of Consensus Conference 2003 patients (3 male and 2 female – mean age 54.3 years) were affected by skin lesions of the foot and were classified as in Table 1. Medications were performed until the reduction and/or complete healing.

Results: The patients have been medicated once a day for 10 days (2, 5) and/or once every three weeks (3/5) for the first two months. The mean time of the treatment was of 196 day for 4 patients. In 1 patient a minor cardiovascular event occurred and time of therapy was 296 days.

Conclusions: In our experience the device was proved to be economic and manageable, allowing the management of the exudates and avoiding, at the same time, the involvement of the perilesional skin that constitutes itself an innovation on the treatment of diabetic foot lesion.

References

Table 1 (abstract A71)

<table>
<thead>
<tr>
<th>Complications</th>
<th>Number of patients</th>
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</thead>
<tbody>
<tr>
<td>glycometabolic failure</td>
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</tr>
<tr>
<td>cardiovascular complications</td>
<td>3/5</td>
</tr>
<tr>
<td>kidney disease</td>
<td>1/5</td>
</tr>
<tr>
<td>rethinic disease</td>
<td>2/5</td>
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</table>

A72
The surgical treatment of BRONJ: Parma Maxillofacial Surgery School experience
T Poli*, S Ferrari, E Sesenna
Maxillofacial Surgery Section, Head and Neck Department, University Hospital of Parma, Parma, Italy

BMC Geriatrics 2010, 10(Suppl 1):A72

Background: The surgical treatment of patients affected by BRONJ (Bisphosphonate-related osteonecrosis of the jaw) represents one of the
most debated issues in the international literature because the data reported to date are preliminary results of long-term studies. In accordance with the guidelines proposed in 2007 by the American Association of Oral and Maxillofacial Surgeons position paper on bisphosphonate-Related Osteonecrosis of the Jaws® and confirmed by the Update 2009 of the same document, surgical treatment should be reserved only to cases of BRONJ in an advanced stage (Stage III) or in the presence of a well-defined bone sequestration. Unfortunately the proposed classification, even if very schematic and user-friendly, in our opinion is still too rigid and does not take into account the patient as a whole.

Materials and methods: At the University Hospital of Parma, a study group has been formed since 2005 for the treatment of patients with BRONJ, involving the various specialties involved in the management of this disease (dentists, maxillofacial surgeons, pathologists, medical oncologists).

To date 150 BRONJ patients were enrolled and treated at the Section of Dentistry and Section of Maxillofacial Surgery.

Results: In our patients with BRONJ encouraging results have been achieved by surgical therapy performed early (stage I or II, with or without the use of lasers), bringing valuable clinical success over 80% of treated sites, compared with results obtained with medical therapy alone (no clinical nor symptomatic stabile improvement for at least three months after treatment).

Conclusions: The decision whether to surgically treat the patient not in an advanced stage, but at the beginnings of necrosis (e.g., in presence of an asymptomatic mucosal dehiscence or of a fistulous intraoral tract) is justified essentially by two elements. The first is that if the bone involvement is still limited (stage I or II) the intervention will undoubtedly be less burdensome for the patient with a surgical operation under local anaesthesia and little post-operative hospitalization. The second is that the possibility of a tight closure of mucosal flaps creates an anatomical barrier to pathogenic microorganisms. In this way it would limit the risk of progression of infection with the related complications in terms of symptoms and functional impairment.

The School of Parma sustains that, without the possibility to reach healing as histological and radiological restitution ad integrum, it is necessary to adopt a classification of the level of clinical results obtained with the surgical procedure which considers the clinical symptomatology and objectivity, called Level Clinical Success.

**A73**

Surgical treatment in critical limb ischaemia
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Department of Cardiovascular Surgery - Sant’Anna Hospital, Catanzaro, Italy

Background: Recommendations of clinical guidelines for the treatment of critical limb ischemia (CLI) are based on randomized controlled trials [1]. Surgery using different grafts (venous or prosthetic) is in competition with percutaneous angioplasty. Progress of endoluminal techniques has brought certain authors to think that angioplasty is now the first treatment of critical limb ischemia [2].

Materials and methods: The indications of TASC II are: endovascular for type A, endovascular (with qualifications) for type B, open surgical (with qualifications) for type C, and open surgical for type D. [3].

Our experience, from 2000 to 2009, is of 377 patients (250 m - 127 f.). We perform distal revascularizations (tibial, peroneal and plantar) with great, small saphen vein and veins of the arm on 407 limbs. Mean age: 72 y. (19-25). Our patients had as risk factors: IDDM 66%, CAD 47%, CABG 8%, COPD 7%, ESRD 20% and 9.5% were in dialytic treatment.
Results: We have a 30 day mortality rate of 2.7%, graft occlusion 9% and amputation 2.6%. Comparing our results to those of the literature for venous or prosthetic bypasses and distal angioplasties, we remain convinced of the high efficiency, in the long run, of infra-popliteal venous bypass grafts. Meanwhile, recent data on distal angioplasties are promising and in constant progress [2].

References


A74

Carotid Endarterectomy (CEA) and Carotid Artery Stenting (CAS): prophylaxis and treatment of stroke

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Chair of General Surgery –Vascular Surgery Training Programme – University Magna Graecia of Catanzaro, Italy

BMC Geriatrics 2010, 10(Suppl 1):A74

Background: The endarterectomy (CEA) has always been considered the gold standard for significant carotid stenosis treatment (obstruction of the lumen ≥ 70%). The stenting (CAS) techniques have made great steps forward in recent years and it is considered more and more a valid alternative to CEA. The aim of this study is to verify which of the two techniques is most suitable for the treatment of carotid stenosis in the case of primary and secondary prevention of stroke in elderly patients.

Materials and methods: In this study Nr 100 patients aged ≥ 70 (F:M 2:1) were enrolled from 2005 to 2008. Of these, 65 were submitted to CEA and 35 to CAS. 70 patients had had a previous stroke at the anamnese. The 30 patients with a negative history for strokes presented: carotid stenosis ≥ 70%, hypertension, smoking history, at least one Transient Ischemic Attack (TIA) within 6 months preceding the surgical approach. Even the 70 patients with a history of a stroke showed significant comorbidity, but in these cases surgery was performed within 30 days from the occurrence, Table 1.

In Group A, the choice of technique was influenced by the assessment of the contralateral internal carotid condition: the presence of a stenosis ≥ 60% directed the choice towards the CEA. In the other cases CEA was performed.

In Group B, CAS was performed in the patients presenting recurrent stenosis after CEA.

Both groups began the antiaggregant therapy.

Results: The follow up of patients at 12 months after surgery showed for patients in A group only 1 case of stroke at 8 months after surgery in a patient undergoing CEA and no TIA in the rest of the group. For patients in B group, 5 (3 CEA, 2CAS) died of causes unrelated, for the remaining 65: 57 patients undergoing CEA 3 had a new stroke, 3 showed a significant stenosis. In 8 patients undergoing CAS at 12 months there was no complication.

Conclusions: In the primary prevention of stroke there is no evidence that prefers one technique rather than another. In secondary prophylaxis, although the CEA remains the gold standard technique, the first data collected after 12 months follow-up suggest best results for patients undergoing CAS.

Reference


A75

Abdominal Aortic Aneurysm (AAA) in the elderly: endovascular versus open surgical repair

R Russo

Chair of General Surgery, Vascular Surgery Training Programme, University Magna Graecia of Catanzaro, Italy

BMC Geriatrics 2010, 10(Suppl 1):A75

Background: The traditional surgical intervention of open aneurysmectomy and prosthetic graft is still now the gold standard for the treatment of abdominal aortic aneurysm. Today, the new mini-invasive endovascular approach is a valid therapeutic option to customize the treatment based on clinical characteristics of patient and morphological features of the aneurysmal lesion. The purpose of this study is to establish which technique is more suitable for the treatment of the AAA in the elderly patients.

Materials and methods: 100 patients aged between 65 and 75 (MF 85:15) were enrolled in 3 years. After a preoperative cardiac screening, patients were divided into two groups of 50 patients. In group I were included high risk patients (acute renal insufficiency, chronic obstructive pulmonary disease, hypertension and valvular defects), while in group II were included low risk patients with not relevant pathologies. All patients of group I underwent endovascular and surgical treatment, patients in group II were submitted to “open” surgical intervention because of moderate risk.

Results: Of the 50 patients of group I, 2 deaths have occurred in the immediate post-operative period for pre-existing comorbidities. The follow-up at 12 months with eco Doppler ultrasonography showed the absence of endoleak or an increase in the volume of AAA in 45 patients, while for the last 3 patients an open laparotomy was performed for a conversion with a prosthetic graft immediately after the endovascular procedure. In the immediate post-operative period, we registered 4 deaths among patients of group II due to cardiac arrhythmic or ischemic complications or lung failure. The follow up at 12 months has shown paresis of the ileum in 3 patients; the other 43 had a normal post-operative course, Table 1.

Conclusions: The study shows that the minimally invasive and endovascular method represents a valid therapeutic option especially in high risk patients with a reduction in immediate post-operative complications. The one year follow-up has revealed the normal predictable incidence of complications.

Reference


A76

Use of platelet gel for the treatment of diabetic foot ulcers

R Russo

Chair of General Surgery –Vascular Surgery Training Programme – University Magna Graecia of Catanzaro, Italy

BMC Geriatrics 2010, 10(Suppl 1):A76

Background: The aim of this paper is to evaluate the efficacy of platelet gel also for the management of “diabetic foot” lesions. The most important principle considered in this work is the activity of several tissue growth factors inside the pattern of gel.

Table 1 (abstract A75)

<table>
<thead>
<tr>
<th>Traditional Surgery</th>
<th>Endovascular Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>&lt;70</td>
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<tr>
<td>Sex</td>
<td>M&gt;F</td>
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<tr>
<td>Disorders preoperative</td>
<td>Absent</td>
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<tr>
<td>Follow up 7 days</td>
<td>4</td>
</tr>
<tr>
<td>Follow up 12 months</td>
<td>3 paresis of ileum</td>
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Table 1 (abstract A74)

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<th>WITHOUT STROKE (Group A)</th>
<th>PREVIOUS STROKE (Group B)</th>
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<td>CEA</td>
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<tr>
<td>CAS</td>
<td>25</td>
</tr>
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</table>
**Materials and methods:** During a period of 4 years, we have considered 42 patients aged between 65 and 75 (F:M 3:1), all submitted to other therapeutic options with failure of previous therapy, Table 1. The platelet gel is produced from concentrated PLT obtained with different procedures. These derive from the amount of required PTLs, mixed and gelled with Ca-gluconate. The combination with trombin allows the activation of gel. This active gel is immediately put on the lesions.

The following therapeutic scheme is mandatory for the correct practice:

1) antisepsis, cleansing, debridement and monitoring of exudate; 2) application of platelet gel; 3) weekly monitoring of lesions, Table 2

**Results:** Among the patients presenting stump dehiscence and arterial ulcers healing time has been long (from 4 to 6 months) but satisfactory. The best results have been observed in patients with neuropathic ulcers, if we consider the healing time of the wound within 6 months from the start of treatment. Of these 20 patients, 14 have presented a complete healing of wounds, 3 undergone a smaller amputation and 3 undergone a bigger amputation, after six months starting treatment.

**Conclusions:** The platelet gel may be considered an additional and innovative "weapon" available for the treatment of chronic skin lesions due to ulcers in "non responders" patients to ordinary therapies. It can be clearly considered a useful complement to the most popular and successful alternative therapeutic techniques nowadays in use (advanced dressings, skin grafts, etc.). Another significant feature is related to fast discharge of patients; this represents a very important socioeconomic aspect. The platelet gel dressing is a safe and not expensive technique with rapid healing times; its use should be considered on a large scale.

**Reference**


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**Table 1 (abstract A76)**

<table>
<thead>
<tr>
<th>Clinical presentation</th>
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<td>Stump dehiscence</td>
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<tr>
<td>Arterial ulcers</td>
<td>14</td>
</tr>
<tr>
<td>Neuropathic ulcers</td>
<td>20</td>
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**Table 2 (abstract A76)**

<table>
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<tr>
<th>Pathogenesis of ulcer</th>
<th>Nr Cases treated with platelet gel</th>
<th>Healing within 12 months</th>
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</thead>
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<td>Dehiscence</td>
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<td>6</td>
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<tr>
<td>Ischemic</td>
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<td>10</td>
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<tr>
<td>Diabetic</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>TOTAL</td>
<td>42</td>
<td>30</td>
</tr>
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</table>

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**Materials and methods:** Twenty patients affected by AMD (age range 60-72 years) were enrolled in the study. Inclusion criteria for this study were: evidence of age-related macular degeneration, angiographic evidence of predominantly classic and occult CNV extending under the center of the foveal avascular zone, absence of coexisting ocular disease. Patients enrolled showed baseline visual acuity ranged 1.0-0.84 logMAR, central microperimetric (Nikon MP-1) sensitivity 2 to 10 dB. Each patient underwent weekly assessments, for three months, of visual acuity, microperimetry and focal electroretinogram (FERG), performed according to a published technique.

**Results:** Following the first intravitreal injection, mean visual acuity (Figure 1), microperimetric sensitivity (Figure 2) and FERG amplitude (Figure 3) increased steadily from baseline values over the treatment period, with further improvements following each intravitreal injection (P < 0.001).

**Conclusions:** Ranibizumab therapy can improve central macular function in patients with predominantly classic and occult CNV.

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**A77**

**Macular functional changes in patients with neovascular age-related macular degeneration receiving ranibizumab therapy (Lucentis)**

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Department of Ophthalmology, Magna Græcia University, Catanzaro88100, Italy

**BMC Geriatrics** 2010, Volume 10 Suppl 1

**Background:** Vascular endothelial growth factor (VEGF) is considered to play an essential role in the pathogenesis of age-related macular degeneration due to its vascular permeability-inducing and angiogenic properties. Ranibizumab, a small antibody fragment designed to competitively bind all VEGF isoforms, passes after intravitreal injection into all retinal layers reaching the retinal pigment epithelium-choroid complex. The actions of ranibizumab result in reduced cell proliferation, reduced formation of new blood vessels, and minimization of vascular leakage. The aim of this study was to evaluate the prospectively macular function in in patients with neovascular age-related macular degeneration (AMD) patients undergoing repeated intravitreal injections of Ranibizumab therapy (Lucentis).

**Materials and methods:** Upon a period of 4 years, we have considered 42 patients aged between 65 and 75 (F:M 3:1), all submitted to other therapeutic options with failure of previous therapy, Table 1. The platelet gel is produced from concentrated PLT obtained with different procedures. These derive from the amount of required PTLs, mixed and gelled with Ca-gluconate. The combination with trombin allows the activation of gel. This active gel is immediately put on the lesions.

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**Conclusions:** The platelet gel may be considered an additional and innovative "weapon" available for the treatment of chronic skin lesions due to ulcers in "non responders" patients to ordinary therapies. It can be clearly considered a useful complement to the most popular and successful alternative therapeutic techniques nowadays in use (advanced dressings, skin grafts, etc.). Another significant feature is related to fast discharge of patients; this represents a very important socioeconomic aspect. The platelet gel dressing is a safe and not expensive technique with rapid healing times; its use should be considered on a large scale.

**Reference**

A78
Optical Coherence Tomography: imaging of age related maculopathy
V Scorcià, M Rechichi
Department of Ophthalmology, Magna Graecia University, Catanzaro, 88100, Italy
BMC Geriatrics 2010, 10(Suppl 1):A78

Background: Age-related macular degeneration (AMD) is the leading cause of severe vision loss in the developed world in patients over 60 years. AMD is characterized by two distinct forms: dry and wet. Optical coherence tomography (OCT) is a non-invasive, useful and reproducible diagnostic tool that provides cross-sectional images of retina and has a primary role for diagnostic and therapeutic management of AMD. The spread of anti-VEGF intravitreal injection for therapy of wet AMD further emphasized the role of OCT for treatment algorithms allowing a precise characterization of lesions and strict non-invasive retinal monitoring in the follow-up.

Main indications and limits of OCT will be discussed as well as the various morphological presentations of dry and wet AMD underlying retinal changes before and after therapy.

Materials and methods: We analyzed 500 eyes of 270 patients affected by dry or wet AMD that underwent a complete ophthalmological examination and OCT scan with two different machines. A time domain OCT (TD-OCT, Stratus OCT3, Carl Zeiss Meditec, Dublin, CA) and a Fourier Domain OCT (FD-OCT, RTVue-100, Optovue, Fremont, CA).

We used a radial line pattern scan algorithm with TD-OCT (see Figure 1) and radial and raster scan with FD-OCT with additional tridimensional reconstruction (see Figure 2).

Results: B-scan analysis of two instruments allows detailed reproduction of anatomical retinal layers in AMD. FD-OCT images are more accurate and the computing process allows tridimensional reconstruction of sagittal and coronal plane.

Conclusions: Optical coherence tomography is a simply, non-invasive and reproducible technique for retinal imaging in patients with AMD. The spread of FD-OCT allows a precise characterization of AMD and accurate analysis of intraretinal layers. Tridimensional reconstruction tomography improves the visualization of photoreceptor morphology.

A79
Pluriannual experience in stapled haemorrhoidopexy in the elderly
S Spirch1, F Tona1, A Bruttocao1, B Martella1, C Militello1, M Gruppo1, F Mazzalà1, R Lorenzetti1, C Sirianni2, O Terranova1

1Dipartimento di Scienze Chirurgiche e Gastroenterologiche Sezione di Clinica Chirurgica Geriatrica - Università di Padova, Italy ; 2Senior House Officer, Medicine and A&E Directorate, Leicester Royal Infirmary, Italy
BMC Geriatrics 2010, 10(Suppl 1):A79

Background: Compare two groups of patients, ≥ 70 years old and < 70 years old, diagnosed with III-IV grade haemorrhoids that underwent a stapled haemorrhoidopexy [1].

Materials and methods: Between May 2001 and October 2009, 299 patients underwent a stapled haemorrhoidopexy (PPH Ethicon-
EndoSurgery®). The database was ordered in two groups: the first composed of 29 patients (9.7%) aged ≥ 70, while the second was composed of 270 patients aged < 70. The preferred type of anaesthesia was spinal with sedation (92.8%), associated with elastomeric pump of NSAIDs during the first 24 hours. The two groups were compared in order to verify their homogeneity: no significant differences were found either in the distribution of the grade of the disease, or in the spectrum of symptoms (P > 0.05). Because of the comorbidity in the elderly, the stratification of the ASA risk was different (P < 0.0001).

Results: The procedure was performed in day surgery, with an average hospital stay of 1 day, in 75% of the patients of the first group and in 48% of the second group; the analysis of the surgical performance of this technique, regarding the timing and the use of haemostatic stitches, showed no significant differences between the two groups (P > 0.05).

Early haemorrhagic post-operative complications were 2.3% of which 1 occurred in the first group and 6/7 required surgical review. Late haemorrhagic complications were 3.3%, all of them occurred in the second group; the management of the late haemorrhages required surgical review in 4 patients and blood transfusion in 3 cases. During the first post-operative week several cases of significant anal pain occurred, tenesmus, faecal urgency and two cases of haemorrhoidal thrombosis. During the follow-up, which lasted on average for 3.9 years, we observed 3 relapses (10.3%) among the first group and 21 relapses (7.8%) among the second.

Conclusions: Haemorrhoidal disease, although tending to relapse among susceptible patients, can be effectively treated with stapled haemorrhoidopexy (PPH). Thanks to a several years’ follow-up, our experience shows an assessment of the long-term results of this technique, focusing particularly on the comparison between the results in the elderly and in younger patients. Longo technique is usually well tolerated by all the patients, even though not totally pain-free in the early post-operative follow-up (first week). This procedure can be performed safely in the elderly as well as in the younger patients with equivalent results.

Reference

A80
Epidemiologic and clinical study of skin cancer in the insular regions of Italy
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BMC Genitourin 2010, 10(Suppl 1):A80

Background: Skin tumors, including Epithelial tumors, Adnexal tumors, Merkel carcinoma and Melanoma, are a prominent disease of advanced age, with a frequency of 40 cases/year for 100,000 people and a mortality of 1% [1]. Ethiopianogenesis is correlated with external factors, above all UV exposition, and skin and adnexal phenotypes; for this reason people from the regions of insular Italy are at risk from this pathological state.

Materials and methods: This study is an analysis of skin tumors that have been treated in the last 10 years in our Department of Plastic Surgery. We have considered the age incidence, sex incidence, intrinsic sphincter deficiency) as its association with bladder instability can be different. Also patients may have undergone previous surgery for SUI. Finally, it may have been necessary to repeat the injectors more than one time. Despite this inhomogeneity of casuistry, this remains highly indicative regarding the effectiveness of the procedure of bulking agent injection.

Conclusions: The injection of bulking agents is an attractive treatment option for SUI in view of their safe side effect profile. Their efficacy will improve with further technological advancements and the development of new ideal agents.

References

A82
Use of hyaluronic acid filler and botulinum toxin type A in facial rejuvenation
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BMC Genitourin 2010, 10(Suppl 1):A82

Background: Facial soft tissue augmentation and rejuvenation have become over the past several years the practice more requested in
aesthetic medicine. The authors share their experiences to evaluate long term safety, clinical effectiveness and patient satisfaction regarding the injection of hyaluronic acid (HA) filler and botulinum toxin type A (BTTA). In some cases the patient received a combined treatment of HA and BTTA to obtain absolute aesthetic satisfaction.

Materials and methods: From June 2007 to June 2009, a total of 208 Caucasian patients (179 female and 29 male) received a HA or BTTA (63 cases) injection in different facial areas; oral commissure, nasolabial folds 1, lips, cheeks, chin. Formulations used in this study are the 20 mg/mL HA smooth, highly cohesive, viscous, fully reversible, volumizing filler 2 indicated to restore facial volume and 50 units of Clostridium botulinum type A neurotoxin complex, added with 1.0 mL of saline solution 0.9%. This trial has been structured with a preliminary visit to evaluate the loss of volume and the individual expectations. All injections of HA were in the deep dermis or above the periosteum whereas BTTA were performed in intramuscular site in frontal, orbito-zygomatic regions and in glabellar area. The most part of injections were not performed under local anesthesia and the mean total of injection volume per each patient was about 4.4 mL for HA and 1.0 mL for BTTA. Every patient was photographed at each visit, before and after the treatment with a follow up at 3, 6, 12, 24 months, recording procedural details, effectiveness, aesthetic outcomes and adverse events. Patients were also asked to evaluate their personal satisfaction by using a subjective scale from 0 (no satisfaction) to 5 (absolute satisfaction) starting from pre treatment photos. Finally they were asked if they would repeat the treatment again.

Results: Volume loss declined significantly after treatment and every patient noted a positive change in his own appearance. Local adverse events appeared only in three patients: two of those consisting in a local transitory edema and inflammatory reaction and the third was a slight blepharoptosis for BTTA, normalized one month later. Personal satisfaction has been absolute in 182 patients (87.5%) and 98% of the patients would repeat treatment.

Conclusions: The 20–mg/mL smooth, highly cohesive, viscous, volumizing HA filler and the BTTA were effective, well tolerated and easy to use in clinical practice.

References

A84
Plasma levels of fibrinogen and ambulatory blood pressure monitoring: study in elderly patients
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Background: Fibrinogen, the precursor of fibrin in the coagulation cascade, is also a protein of the acute phase of inflammation, and it is the major determinant of plasma viscosity, all risk factors involved in the genesis of atherosclerotic vascular disease. The aim of this study was to evaluate the association between the fibrinogen plasma levels and blood pressure measured by ambulatory monitoring in 24 hours.

Materials and methods: In our study we examined 360 patients with ischemic heart disease and/or hypertensive heart disease. All patients underwent cardiovascular examination, laboratory tests, ambulatory blood pressure monitoring and 24-hour Holter-ECG. Our population was then divided into tertiles according to the plasma fibrinogen levels (1st tertile 272 + 26 mg/dl; 2nd tertile 338 + 19 mg/dl; 3rd tertile 468 + 86 mg/dl).

Results: Our data showed no statistically significant differences between the values of systolic and diastolic blood pressure (SBP, DBP) detected by mercury sphygmomanometer, in the 3rd tertile of plasma fibrinogen levels versus the other tertiles. The on the other hand, mean values of the systolic blood pressure, of the 24 hours blood pressure (SBP 24h), of the day-time (SBPD) and night-time (SBPN) pressure were significantly higher in the 3rd tertile than in the 2nd or 1st tertile of fibrinogen. Moreover, we observed a statistically significant reduction of the mean values of diastolic pressure of 24 hours (DBP24h), of diurnal (DBPD) and nocturnal (DBPN) pressure, resulting in significant increase in values of pulse pressure (PP), in the 3rd tertile than the 2nd or 1st tertile of fibrinogen. In conclusion, our data showed that in the elderly patients high plasma fibrinogen levels are significantly correlated with the values of systolic and diastolic ambulatory blood pressure monitoring and the mean values of heart-rate. Moreover, the analysis of individual tertiles showed a prevalence of atherosclerotic coronary disease significantly higher in the 3rd tertile of fibrinogen (76% vs. 55% and 35%, p = 0001) than in the 2nd and 1st tertile.

Conclusions: Our data confirm that high levels of fibrinogen are associated with atherosclerotic coronary disease and represent a risk factor for cardiovascular disease in elderly patients.

A85
B-type natriuretic peptide (NT-proBNP) and thyroid function: study in elderly subjects
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Background: B-type natriuretic peptide (NT-proBNP) is a cardiac neurohormone that is secreted from the left ventricle in response to
volume and pressure overload as occurs in patients with congestive heart failure. NT-proBNP has now become a useful tool in the diagnosis of congestive heart failure and in the management of patients with acute dyspnea. In recent years, several studies showed that NT-proBNP levels may be influenced by thyroid diseases. However, there aren’t data on the elderly population, a group of patients in whom the incidence of both thyroid diseases and heart failure is frequent. The aim of this study was to assess the levels of NT-proBNP in a group of elderly patients with dyspnea and thyroid disease and without congestive heart failure.

Materials and methods: We examined 41 patients with thyroid disease: 10 with overt hyperthyroidism, 8 with subclinical hyperthyroidism, 8 with subclinical hypothyroidism, 7 with overt hypothyroidism and 8 with euthyroid multinodular or uniodinous goiter. As a control, we used 30 patients without thyroid disease or other conditions that could influence the levels of NT-proBNP. Serum levels of NT-proBNP, thyroid hormones, echocardiographic parameters and Holter ECG were evaluated in all subjects. In patients submitted to antithyroid or replacement therapy, the valuation of serum levels of NT-proBNP was performed before and after treatment.

Results: NT-proBNP levels were significantly higher in patients with overt hyperthyroidism and subclinical hyperthyroidism compared with control subjects and patients with normal thyroid function. NT-proBNP levels were lower in patients with overt hypothyroidism compared to normal subjects. Conversely, there was no significant difference between the levels observed in patients with subclinical hypothyroidism and those of normal subjects. Drug treatment was able to induce a normalization of NT-proBNP levels both in patients with hyperthyroidism and in patients with hypothyroidism.

Conclusions: The levels of NT-proBNP are influenced by a thyroid function with a more pronounced effect of hyperthyroidism than hypothyroidism. Therefore in the presence of elevated values of NT-proBNP and the absence of signs of heart failure it is necessary to consider the possible presence of a condition of overt or subclinical hyperthyroidism.

A86 Chronic Heart Failure management program

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BMC Geriatrics 2010, 10(Suppl 1):A86

Background: Chronic Heart Failure (CHF) is one of the most remarkable health problems because of its prevalence (up to 2% in west countries), morbidity and mortality. CHF is a disease of the elderly: approximately 80% of the patients hospitalized with CHF are more than 65 years old. CHF has a strong impact in terms of social and economic effects: very frequent hospital admissions and a significant increase of medical costs.

CHF elderly patients demand an effective and integrated disease management program, because in these patients the following are present: Poor self-care, High prevalence of comorbidities (COPD, diabetes, hypertension, anaemia), Renal dysfunction, cancer). High prevalence of diastolic heart failure, Polypharmacy, Physical and cognitive limitations (Difficult transfers to the hospital), Inadequate social support and social isolation, Depression and anxiety, High incidence of precipitating factors, Poor education, Poor compliance to therapy (pharmacological and not), Need of frequent reassessments [1].

Management program (2,3): Elderly patients with concomitant diseases (the patient himself and his family are considered as active users) Personnel Multidisciplinary team providing specialized follow-up: Nurse (responsible for education and follow-up), Specialist (internist, geriatrician, cardiologist), Dietician, Psychologist, Social assistant. Primary care physician: Telephone follow-up and improved communication

Methods: Home assistance, improved communication (Easy and frequent telephonic contacts)

Interventions: Patients and family education, Diet counseling, Therapy adjustment, Increase in compliance to diet and therapy, Intensive follow-up for early detection and treatment, Episodies of WHF, Concomitant diseases (e.g. infections).

Aims: Reduction in the incidence of hospitalizations, Improvement in the clinical course quality of life, Reduction in management costs.

References


SPECIALIZED MEDICINE

A87 Immuno-virological response and clinical outcome in naive elderly patients treated with antiretroviral therapy (HAART)

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BMC Geriatrics 2010, 10(Suppl 1):A87

Background: In rich countries the prevalence of HIV/AIDS among elderly patients (≥50 years) is increasing as a result of the extended survival of HIV+ patients receiving antiretroviral treatment (HAART), growing new infections and new late diagnosis. Data about efficacy and tolerability of HAART in old age are controversial. The aim of this retrospective study is to evaluate the efficacy of HAART and clinical outcome in a ≥50 year group of patients compared to a control group (<50 years old).

Materials and methods: The study population includes all naive patients treated with HAART from November 1996 to June 2008 and followed in two different units of Infectious disease in Catania (Sicily). We evaluated the following parameters: epidemiological (sex, age, risk factors), immuno-virological (CD4 cell count, HIV RNA viral load), and clinical (CDC stage, first treatment, number and causes of therapeutic switch, new AIDS diseases and death).

Results: 272 HIV+ patients were enrolled for the analysis: 212 (78%) male; 121 (44%) heterosexuals, 101 (38%) homo-bisexuals, 44 (16%) injection drug users; 138 (50%) CDC A, 32 (12%) CDC B, 102 (38%) CDC C; median CD4 cell count was 163/µl (IQ range 49–322), median HIV-RNA viral load 5.0 log10 (IQ range 4.3–5.4). Fifty-six subjects (20.6%) were ≥50 years old. At baseline, among the elderly, the sexual risk was more frequent than in young (p < 0.01); older patients were also more frequently symptomatic (p = 0.002). Instead we did not observe any difference as to CD4 cell count and HIV-RNA copies/ml.

After twelve months of HAART no divergence was noticed between elderly and younger patients regarding median absolute increase of the CD4 cell count (+170 vs. +208 cells/µl) and percentage of patients with HIV-RNA <400 copies/ml (85% vs 83%).

After twenty-four months, a higher number of patients with HIV-RNA <400 copies/ml (as treated analysis) was been shown in elderly group (p = 0.05). Probability of first treatment discontinuation (Kaplan Meier analysis), number and causes of therapeutic switch were similar in both groups.

After a median follow-up of 65 months no differences were seen regarding new AIDS diseases whereas elderly patients had a higher probability of death compared to younger (14.3% vs 4.6%) (p = 0.02).

Conclusions: This retrospective study shows a similar immunological response in elderly and younger naive patients on HAART. Older patients have a higher probability to maintain undetectable HIV-RNA viral load (adherence effect?). However, hard clinical end-points are more frequent in older subjects. Prospective studies are necessary to further investigate our findings.
A88
Language disorders in degenerative dementias
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BMC Geriatrics 2010, 10(Suppl 1):A88

Background: Progressive selective deterioration of language is caused by cerebral lesions involved in processes of language elaboration and is characteristic of several forms of dementia such as Alzheimer’s disease (AD) and Frontotemporal dementia (FTD), that are neurodegenerative dementia and epidemiologically relevant. AD language disturbances are characterized by difficulties in word selection: language becomes impaired, simple and often lacking of syntactic structures. In the Frontotemporal lobar degeneration spectrum, the language disorder is a key symptom not only for FTD, but also of two specific forms that are Primary Progressive Aphasias and Semantic Dementia. Language disorder is characterized by reduction of verbal initiative evolving towards a complete mutism. Echolalia and perseveration are frequently observed.

In a calabrian population in which FTD is highly prevalent [1], FTD patients have been identified as carriers or non carriers of the Progranulin (GRN) c.1145insA mutation [2]. The patients groups (GRN+ e GRN–) were compared with respect to the language disturbances and age at onset.

Patients and methods: 28 patients (10 GRN+ and 18 GRN–; mean age at onset 71.7 ± 11.9; MMSE 20.9 ± 5.2) were evaluated and, when possible, tests of Phonological Verbal Fluency (PVF) and Categorical Verbal Fluency (CVF) were performed.

Results: All GRN+ and GRN– patients showed a massive reduction of verbal initiative. GRN+ presented only in 50% of cases with reduction of verbal initiative, but when the disease became manifest, language was completely lost. All GRN– patients (100%) at the onset and in the course presented with reduction of verbal initiative but without completely losing the language. PVF and CVF in patients able to perform tests (3/10 in GRN+ and 11/18 in GRN–) resulted normal.

The onset of FTD in GRN+ patients was early (64.3 years) compared to GRN– (76.0 years) patients (p = 0.01).

Conclusions: Language disturbance at onset in both FTD groups was qualitatively impaired and characterized by the massive reduction of verbal initiative evolving differently on the basis of presence/absence of GRN mutation.

Language disturbance evaluation tests were not impaired at onset and did not differentiate the two subgroups. FTD GRN– disease seemed more benign because of the delayed onset and the persistence of the language.

References

A89
Neurodegenerative diseases: complexity of clinical phenotypes in genetic models of Alzheimer’s disease and frontotemporal dementia
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BMC Genet 2010, 10(Suppl 1):A89

Background: Neurodegenerative diseases are a wide and complex group of disorders, age – associated, chronic and progressive with unknown, and probably different, etiologies. The complexity of the phenotype is probably due to the expression of a selective vulnerability of the different neuronal population and to the different pathogenetic mechanisms. This aetio-pathogenetic complexity has been approached through the study of simple models constituted by the large Calabrian families in which Alzheimer’s disease (AD) segregates associated to the

Presenilin 1 (PS1) Met 146Leu mutation [1] and Frontotemporal dementia (FTD) is caused by the Progranulin (GRN) c1145insA mutation [2].

To investigate the phenotypic variability at onset in patients belonging to the two families for which all data (demographic, clinical and genetic) were available.

Materials and methods: The clinical presentations were studied in 50 out of 148 familial AD (FAD) patients (age at onset = 4.0 ± 4.8; 38% women, 18 alive) and in 9 out of 34 patients (age at onset 65.1 ± 17.1) belonging to the FTD family.

Results: Phenotypic variability at onset in AD is broad: four different clinical presentations may be recognized: 1) Amnestic (38%); 2) Disoriented (20%); 3) Dysexecutive (14%); 4) Apathetic (28%). In the FTD, 89% of patients presented at onset with a memory deficit and 33% were spatially disoriented.

Conclusions: The study conducted on AD and FTD genetic models provides evidence that different genotypes present with a clinical overlapping at onset: symptoms classically associated with FTD are also present in AD and, conversely, FTD patients who are carriers of a PGRN mutation always show a memory deficit. Knowledge advancement calls for a steady update and revision of the clinical criteria routinely used in the diagnostic processing.

References

A90
Multidimensional evaluation in clinical diagnosis of Alzheimer’s disease: genetic risk in Alzheimer’s disease and neurodegenerative dementias
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BMC Genet 2010, 10(Suppl 1):A90

Background: Late onset degenerative dementia is a growing, common and complex disorder in which the aetiological role played by environment and genes has not yet been established. A familial component is frequently ascertained in Alzheimer’s disease (AD) (30% of first degree relatives affected) and also in Frontotemporal Dementia (FTD) (40-60%). Early onset degenerative dementia has sometimes been recognized as caused by autosomal dominant genes, Presenilines (PS1 and PS2) and the Amyloid Precursor Protein (APP) in AD, whereas in Frontotemporal dementia, two major genes (Microtubule Associated Protein tau, MAPT and Progranulin, PGRN) have also been identified. PS1 and MAPT mutations have been identified also in very early onset patients (PS1 24 years [1], MAPT 22 years [2]), but also in late onset patients (PS1 78 years [3], MAPT 75 years [4] 87 years [5]). To evaluate whether FAD and PGRN gene mutations account for late onset dementia.

Materials and methods: Late onset familial dementia patients (onset >65 years) were regularly diagnosed in our centre. Diagnosis of dementia was performed through a detailed clinical assessment. The NINCDS-ADRDA and Lund-Manchester group criteria were used for diagnosis of AD and FTD respectively.

Molecular screening of PS1, PS2, APP and PGRN genes was performed. Results: A PS2 Ser130Leu [6] and a novel PS2 Val130Met [7] mutations have been found in two late onset AD cases with onset at 83 and 76. Three more unrelated cases with an APP A713T mutation showed an onset age between 73 and 82 years [8]. A novel PGRN c1145insA has been identified in a FTD patient of 87 years belonging to a pedigree whose age at onset spans from 35 to 87 [8].

Conclusions: Several autosomal dominant genes, either in AD or in FTD show an impact on late onset dementia. Heritability in late onset forms is now more evident, probably due to longer life survival. It is possible that mutation frequency has been underestimated due to the lack of wide genetic epidemiology. Genetic screening of FAD and PGRN genes might be recommended in familial late onset dementia as a part of Multidimensional evaluation.
A91
Long-term diabetic complications in elderly patients with variable levels of HMGA1 expression
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BMC Geriatrics 2010, 10(Suppl 1):A91

Background: Type 2 diabetes mellitus is a very common metabolic disorder affecting ~200 million people worldwide [1]. Chronic complications of the disease due to poor metabolic control are specifically associated with long-term damage, dysfunction and failure of various organs, causing blindness, renal failure, amputations, and increased risk of cardiovascular diseases [2]. Previously, we reported a novel genetic flaw that markedly reduced the intracellular expression of the high mobility group A1 (HMGA1) protein, and adversely affected insulin receptor expression in cells and tissues, leading to human diabetes [3]. Also, the involvement of HMGA1 in the transcriptional regulation of genes essential in both the inflammatory response and atherosclerosis is well known [4]. Herein we have investigated the prevalence of chronic complications in an elderly diabetic population according to the expression levels of HMGA1.

Materials and methods: The study was performed in 125 elderly patients (aged over 65 years) with type 2 diabetes consecutively attending our outpatient diabetes clinic, in Catanzaro. 50 unrelated age-, sex-, and ethnically-matched healthy controls were enrolled. Periodic clinical and biochemical examinations were performed on every patient, before and during the time of investigation. Total RNA was prepared from peripheral-blood mononuclear cells of patients and controls, cDNA was synthesized and used for HMGA1 real-time PCR (qRT-PCR) amplification. Western blot (WB) analysis of HMGA1 was performed on nuclear extracts from peripheral lymphomonocytes as previously described [5,6]. The study was approved by the local ethics committee (Comitato Etico Regione Calabria, Azienda Ospedaliera “Mater Domini,” Catanzaro) and informed consent was obtained from all individuals.

Results: In 111 patients with type 2 diabetes (88.8%), HMGA1 mRNA and protein expression levels were similar to those of normal subjects (see Figure 1). In contrast, HMGA1 expression was significantly reduced in 14 diabetic patients (11.2%) in which a mean reduction of 50% in HMGA1 content was observed in peripheral lympho-monocytes (see Figure 1). HMGA1 mRNA (left) and protein (right) levels from healthy control individuals (C), and type 2 diabetic patients without (T2D-N) or with (T2D-R) defects in HMGA1 expression. -actin (ACTB) and C/EBP, controls. mRNA and protein abundance are expressed as percent of maximal control value (100%). *p < 0.025 vs C.

A negative correlation was observed between reduced HMGA1 expression and long-term diabetic complications such as retinopathy, nephropathy, neuropathy, and cardiovascular disease (see Table 1).

Conclusions: A deficit of HMGA1 in affected diabetic patients may confer a less severe course of the disease in terms of long-term chronic complications of diabetes.

References

Figure 1 (abstract A91)
Table 1 (abstract A91)

<table>
<thead>
<tr>
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<td>Long term complications</td>
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<tr>
<td>macroangiopathic</td>
<td>36 (32.4%)</td>
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<td>75 (67.6%)</td>
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</table>

1 Include coronary heart disease, myocardial infarction and stroke.
2 Include retinopathy, nephropathy, neuropathy and foot problems.
3 Yates’ chi-square test.


A92

Cutaneous cancers in elderly Medical treatment of actinic keratosis and superficial cutaneous cancers: imiquimod

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BMC Geriatrics 2010, 10(Suppl 1):A92

Background: The aim of this work is to evaluate the efficacy and safety of imiquimod 5% cream used in the treatment of certain non-melanoma skin cancers.

Materials and methods: We treated 30 subjects: 5 actinic keratosis, 3 cheroatoacanthomas, 5 cutaneous horns, 5 superficial basal cell carcinomas, 12 nodular basal cell carcinomas according to the therapeutic pattern - five applications a week for 6-12 weeks. The patients with nodular forms could not be treated with surgery for severe chronic diseases, age, or refusal.

Results: Imiquimod 5% cream was effective and well tolerated both in actinic keratosis and in nodular and superficial basal cell carcinoma.

Conclusions: The treatment of certain non-melanoma cutaneous tumours with imiquimod 5% cream, has been effective, without collateral effects; erythema, edema, vesicles, crusts and erosions with itching or burning in the application area, have been the most frequent adverse events which however did not cause the suspension of therapy. A diligent and continuative follow-up is necessary.

A93

Antipsychotics and dementia

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BMC Geriatrics 2010, 10(Suppl 1):A93

Background: In recent years use of antipsychotics was widely debated for concerns about their safety in elderly patients affected with dementia [1,2].

Materials and methods: In order to update the use of antipsychotics in elderly demented people, Medline research was done using the words elderly, conventional and atypical antipsychotics, adverse events, dementia, behavioural and psychotic symptoms in dementia (BPSD).

Results: Conventional antipsychotics have been widely used for BPSD; an efficacy superior to placebo was shown only at high doses, but they were associated to several and severe side effects [1]. Atypical antipsychotics showed an efficacy superior to placebo in randomized studies in BPSD treatment, with better tolerability profile vs. conventional drugs [3]. However, in 2002 trials with risperidone and olanzapine in elderly patients affected with dementia-related psychoses suggested a possible increase in cerebrovascular adverse events [1]. Drug regulatory agencies issued specific recommendations for undelineing that the treatment of BPSD with atypical antipsychotics is “off-label” [1]. Conventional antipsychotics were shown to be as likely as atypical agents to increase the risk of death among elderly persons and should not be used to replace atypical agents discontinued after the FDA warnings [1]. Before prescribing an antipsychotic drug, the presence of cardiovascular diseases, QTc interval on electrocardiogram, electrolytic imbalances, familiar history for torsades des pointes, concomitant treatments and use of drugs able to lengthen QTc have to be closely taken into account.

Atypical antipsychotics are probably still the best option for short-term (6-12 weeks) treatment of aggression that is severe, persistent, and treatment resistant, but serious adverse events are a major contraindication to long-term therapy [4].

Conclusions: Use of atypical antipsychotics in dementia needs a careful case-by-case assessment, together with the possible drug-drug, drug-disease and drug-food interactions.

References


A94

Early involvement of sympathetic cardiac nerve endings in a patient with REM sleep behaviour disorder (RBD)

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BMC Geriatrics 2010, 10(Suppl 1):A94

Background: REM sleep behaviour disorder (RBD) is a parasomnia characterized by suppression of muscular atonia and abnormal, often violent, motor behaviours during REM sleep. RBD can be either idiopathic or associated with degenerative disorders, such as dementia with Lewy bodies (LBD), multiple system atrophy (MSA), progressive supranuclear paralysis (PSP) or Parkinson’s disease (PD). Myoclonus 12Metadionobenzyguanidine (MBI) enables the assessment of postganglionic sympathetic cardiac nerve terminals. Reduced myoclonus MBG uptake of the tracer suggests cardiac sympathetic denervation. MBG uptake allows a differentiation between Lewy body disease and parkinsons, and other parkinsonisms. Indeed cardiac innervation is impaired in nearly all patients with PD and LBD, while it is preserved in patients with parkinsonisms, such as MSA and PSP. Recently, decreased MBG uptake has been also described in patients with RBD.

Materials and methods: A 72-year-old woman reported a history characterized by frequent nocturnal nightmares, vivid dreams, strong shaking of her limbs, laughing, talking, screaming and frequent falls from the bed. There was no family history of neurological disorders or RBD. When she was first admitted to our clinic (May 2008) her neurological examination showed only a slight facial hypomimia. All cognitive tests were normal, the MMSE showed a score of 28/30 corrected (n.v. >24/30). Routine biochemistry (including serum glucose), haematological tests, electrocardiogram, echocardiography, Holter blood pressure monitoring, brain magnetic resonance imaging were all normal. A polysomnographic examination showed the characteristic features of RBD. In order to investigate the nigrostriatal system integrity, we performed a cerebral SPECT with 123I-FP-CIT that resulted normal. The cardiac MBG scintigraphy showed, however, a markedly reduced cardiac uptake.
Discussion and conclusions: RBD may represent a prodromic phase of neurodegenerative diseases, such as PD, MSA or LBD. In our case, the RBD was the only relevant clinical manifestation in absence of signs of extrapyramidal dysfunction. The DAT-scan of the patient was normal, while the myocardiac MBG scintigraphy showed a marked impairment of sympathetic innervation. This is the first evidence of a patient with RBD with cardiac sympathetic denervation and a normal DAT-scan, demonstrating that cardiac sympathetic nerve terminals may be impaired in absence of detectable damage in nigrostriatal the cardiac innervation may precede neuronal cell loss in the dopaminergic nigrostriatal system.

References

A95
Voxel-based morphometry of adulthood patients with temporal lobe epilepsy
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BMC Geriatrics 2010, 10(Suppl 1):A95

Background: Partial epilepsy represents almost 70% of the epileptic syndrome. It is characterized by partial seizures that arise from the restricted area of the cerebral cortex. Temporal lobe epilepsy (TLE) is the most frequent form of cryptogenic partial epilepsies [1]. The mesial temporal sclerosis is the pathologic abnormality most frequently detected in post mortem studies of subjects with TLE. Voxel-based morphometry (VBM) is a new MRI tool that has been developed to assess differences of brain tissue volumes between subject groups and has been applied in various studies of patients with TLE [2]. In refractory TLE (rTLE) gray (GM) and white (WM) matter abnormalities are not confined to the hippocampus but also are found in extrahippocampal structures [3]. Less is known about mild TLE (mTLE). In the present work, we used optimized voxel-based morphometry (VBM) to identify GM abnormalities beyond the hippocampus in rTLE and in mTLE with evidence of hippocampal sclerosis (HS).

Materials and methods: Brain MRI and VBM of GM with modulation was performed on 30 unrelated patients with mTLE (56% women; mean age 35.6 ± 15.2 years), 19 patients with rTLE (52% women; mean age 38.4 ± 17.4 years) and 37 healthy controls (25 women, mean age 37.3 ± 10.6 years). MRI diagnosis of MTS was based on the atrophy of the hippocampal formation and/or mesial temporal hyperintensity on FLAIR or T2 images, or both.

Results: All patients (rTLE and mTLE) did not have any generalised tonic-clonic seizures for at least three weeks before the scanning. Respectively, mTLE patients showed GM volume reduction of the bilateral thalamus and left hippocampus (FWE < 0.05) whereas rTLE in the thalamus bilaterally (FWE < 0.05) when compared with controls. Conversely, no differences of GM concentrations were found between rTLE and mTLE. Conclusions: In either rTLE and mTLE, VBM shows GM reductions not confined to the hippocampus but mainly in the thalamus bilaterally. Moreover, no GM differences were found between the two groups. This supports the hypothesis that mTLE and rTLE might lie along a biological continuum.

References

A96
Muscle-skeletal fragility: data about elderly people who live in RSA in Calabria
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BMC Geriatrics 2010, 10(Suppl 1):A96

Clinical background: This screening aims to value the osteoporosis’ and the iopo-vitamin D incidence in patients who live in RSA. The vitamin D is important for calcium and bone metabolism and its deficiency causes Mlopatia prossimale, one muscle disease. People over 65 live in the RSA live.

Materials and methods: The valuation begins with a clinical situation to show the risk factors for osteoporosis’s disease: the risk of falls and the previous fragility fractures in particular. After we value the BMD, the blood exams and the x-ray of lumbar and dorsal spine to show the vertebral fractures.

Results: 54 people, 35 females, 19 males, average age 80, 19 patients showed one fragility fracture. The risk of falls was absent in 21 patients, light in 3 patients, middle in 10 patients, high in 10 patients. The BMD was osteoporotic in 37 patients, osteopenia in 8 patients, normal in 6 patients. All patients showed iopo-vitaminosys D. We could make xray in 16 patients only. This was this was the result: 13 patients showed one vertebral fracture, at least.

Conclusions: We demonstrate, once again, that the osteoporosis and the iopovitaminsos D state are under estimated.

A97
Use of clonidine following the weaning phase of the elderly patients underwent elective on-pump cardiac surgery: a prospective randomized study
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BMC Geriatrics 2010, 10(Suppl 1):A97

Background: Alpha-2 adrenergic agonists reduce mortality and myocardial infarction following vascular and cardiac surgery [1]. Few data exist about the weaning phase in this setting.


Randomization: On ICU admission the patient was assigned to group 1 (Clonidine, intervention group) or group 2 (Placebo, control group).

Interventions: Group 1 received intravenous (IV) bolus of Clonidine 0.5 microg/kg followed by continuous infusion of 1–2 microg/kg/hr all over the weaning protocol phase. Group 2 received IV continuous infusion of Sodium Chloride 0.9% all over the weaning phase.

Data collection: We evaluated hemodynamic parameters, Troponin I (Tnl) blood levels, weaning parameters, Delirium Detection Score (DDS), weaning duration and ICU length of stay. The patients were evaluated preoperatively (T0), on ICU admission (T1), after 6 hours (T2) and 30 minutes after the start of weaning protocol (T3).

Results: No differences in preoperative and operative variables (p = NS for all measurements). The incidence of postoperative atrial fibrillation was lower in group 1 (p < 0.001). Following the weaning phase, Heart Rate, Mean Pulmonary Arterial Pressure and Pulmonary Arterial Occlusion Pressure were lower in group 1 (respectively p < 0.001, p = 0.019 and p = 0.037). The Tnl levels was lower in group 1 (p = 0.05). The ratio of respiratory rate and tidal volume (RR/TV) and the product of RR and pressure support (RR x PS) were lower in group 1 (both p < 0.001); the ratio of PaO2 and FiO2 (PA/Fi) and PaCO2 were higher in group 1 (respectively p = 0.0035 and p < 0.001). DDS was lower in group 1.
The use of Clonidine in this setting reduce the stress-
response during the weaning phase, improving hemodynamic stability and myocardial protection.

Reference

A98
Intensive versus conventional insulinotherapy after elective
and on-pump myocardial revascularization in the elderly patient: a prospective and randomized study
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BMC Geriatrics 2010, 10(Suppl 1):A98

Background: In cardiac surgery patients, hyperglycemia was found to be an independent post-operative risk factor for the development of hyperlactatemia and associated with increased morbidity and mortality [1].

Materials and methods: Design: analysis of a prospective and randomized collected database.

Patients: A total of 40 patients (23M; 17F) aged >65 (ASA II-III) submitted to elective on-pump myocardial revascularization from September 2007 to May 2009.

Randomization: on ICU admission, once obtained a preoperative informed consent, the patients were randomly assigned to Group 1 (intensive insulinotherapy during the first 24 hours of ICU stay aimed at glucose levels between 80-110 mg/dl) or Group 2 (conventional insulinotherapy during the first 24 hours of ICU stay aimed at glucose levels between 160-180 mg/dl).

Data collection: Preoperative and each hour (during the first 24 hours in ICU) assessment of Glucose and Lactate blood levels and Body Temperature; Hemodynamic parameters on ICU admission and after 2, 6, 12 and 24 hours. Preoperative and postoperative (12 and 36 hours after ICU admission) assessment of C-Reactive Protein (CRP), White Blood Cells (WBC) and Platelets (PLT) blood levels. Admission, Total Maximum (TMSOFA) and Δ SOFA score (5). Infection Probability Score (IPS) 36 hours after ICU admission.

Statistics: Within-between groups analysis, one-way ANOVA and unpaired t-Test were used when appropriate.

Results: No difference in preoperative and operative variables (p = NS for all measurements). Glucose and Lactate blood levels were lower in Group 1 (p < 0.0001). Haemodynamic parameters were comparable between Groups except Indexed Vascular Resistances that were higher in Group 1 (p < 0.05). CRP levels were lower in Group 1 (p < 0.0001), PLT levels were higher in Group 1 (p < 0.0001). Admission and TM SOFA score were lower in Group 1 (p < 0.0001); IPS was lower in Group 1 (p < 0.01). Intensive insulinotherapy after elective and on-pump myocardial revascularization modulates the inflammatory pattern and can improve clinical response in this setting.

Reference

A99
The Sequential Organ Failure Assessment (SOFA) score: a useful prognostic instrument after cardiac surgery for the elderly patient
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BMC Geriatrics 2010, 10(Suppl 1):A99

Background: Organ dysfunction evaluation using Sequential Organ Failure Assessment score (SOFA score) has been shown to predict mortality and morbidity in adult cardiac surgical patients [1].

Materials and methods: Design: analysis of a prospectively collected database.

Setting: mixed Intensive Care Unit (ICU) in an University Hospital.

Patients: A total of 70 patients (ASA II-IV) aged >65 submitted to cardiac surgery. They were evaluated on 24,48 and 72 hours after ICU admission. All post-operative ASA IV-E (E = emergency) and all ICU patients with different diagnosis were excluded from data collection.

Interventions: the collection of raw data necessary for the computation of a SOFA score on 24, 48 and 72 hours after admission and basic demographic and clinical statistics.

Data collection: We collected the parameters in order to calculate the Admission (AD), Daily, Mean, Total Maximum (TM) and Delta (Δ) SOFA score at the specific time points mentioned above.

Results: The Admission, TMS and Δ SOFA presented a good correlation with mortality (area under the curve 0.9 (SE 0.060) and 0.809 (SE 0.136), respectively). All the patients that receive more than 2000 ml of intraoperative fluids had an Admission SOFA Score between 16 and 20 (p < 0.001). All the patients with preoperative Left Ventricular Ejection Fraction > 45% had an Admission SOFA Score between 2 and 10 (p < 0.001). All the patients mechanically ventilated for more than 5 days presented an Admission SOFA score between 17 and 20, while the same score was between 0 and 10 for those successfully extubated after 24 hours (p < 0.001). The mean cardiovascular, coagulation, hepatic, neurological and renal SOFA score were associated with the highest relative contribution to outcome (area under the curve 0.980 (SE 0.028), 0.951 (SE 0.057), 0.927 (SE 0.069), 0.991 (SE 0.019) and 0.944 (SE 0.061), respectively).

Conclusions: SOFA score is a useful prognostic instrument even in this specific clinical context.

Reference
A101

Up to date in inhalation anaesthesia: desflurane
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Background: Inhaled volatile anaesthetics remain the most widely used drugs for maintenance of general anaesthesia because of their ease of administration and predictable intraoperative and recovery characteristics. The result has been an increasing reliance on fluorinated anesthetics. The most recently introduced anesthetics, desflurane and sevoflurane, are ethers halogenated solely with fluorine. There is controversy regarding the relative perioperative benefits of desflurane versus sevoflurane when used for maintenance of anesthesia in the ambulatory setting. Although studies have consistently demonstrated a faster emergence with desflurane (versus sevoflurane), the impact of this difference on the later recovery end points has not been definitively established.

Materials and methods: We randomized 90 outpatient undergoing superficial surgical procedures (umbilical or inguinal hernia repair) requiring general anesthesia to one of two maintenance anesthesia treatment groups. All patients were induced with propofol, 2 mg/kg, IV, and after placement of a laryngeal mask airway, anesthesia was maintained with either sevoflurane 1%–3% or desflurane 3%–4% in an air/oxygen mixture. The inspired concentration of the volatile anesthetic was varied to maintain hemodynamic stability and a Bispectral Index value of 40–60. Analgesia was provided with local anesthetic infiltration and ketorolac (30 mg IV). Antiemetic prophylaxis consisted of administration of tropisetron 5 mg at the end of surgery. Assessments included recovery times to eye opening, response to commands, orientation, Aldrete and Aldrete modified score. Patient satisfaction with anesthesia, the ability to resume normal activities on the first postoperative day, adverse side effects, and the requirement for postoperative analgesic and antiemetic drugs were recorded in the early postoperative period and during the initial 24-hour period after discharge.

Results: The two study groups had comparable demographic characteristics. Emergence from anesthesia was more rapid after desflurane; however, all patients achieved fast-track recovery criteria before leaving the operating room. Finally, the time to discharge home and the percentage of patients able to resume normal activities on the first postoperative day did not differ significantly between the two anesthetic groups.

Conclusions: Use of desflurane for maintenance of anesthesia was associated with a faster emergence. Despite the faster initial recovery with desflurane, no significant differences were found between the two volatile anesthetics in the later recovery period. Both volatile anesthetics should be useful for ambulatory anesthesia.

Reference

A102

Day surgery in the elderly: pain as fifth vital parameter
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Background: Pain control should be a subject of training in day surgery and specific updating courses for medical and nursing staff in the day hospital and in general for specialized personnel should be done. The ABC acronym may help to remember the fundamental points of pain treatment in day surgery: — assessment: systematic evaluation of pain as the 5th vital parameter; — balanced analgesia: prefer multimodal techniques with the association of nonopioids, opioids and locoregional anesthesia; — continuous audit: continuous verification of patient satisfaction levels; — discharge: discharge the patient with written instruction for home treatment of pain, including details on rescue doses; — education: the educational process of the staff (anesthetists, surgeons, nurses) should be continuous and also involve physicians in general medicine.

Materials and methods: We have evaluated pain management satisfaction in elderly postoperative patients, defining pain management strategies documented in the medical record (MR) that predict patient satisfaction. 56 postsurgical patients aged 65 and older, undergoing elective day surgery procedures (Hernia repair) were surveyed regarding satisfaction with pain management in the first 24 hours postsurgery and the survey results summarized in a score. Pain management variables (patient education, pharmacological and nonpharmacological interventions, demographic variables, and surgery and anesthesia information) were abstracted from the MR. The correlation between the satisfaction score and MR variables was studied.

Discussion: Sixty-two percent of patients experienced severe postoperative pain, yet 87% reported being satisfied with the treatment. The mean satisfaction score = standard deviation was 59.3 ± 10.8 (range 10.6-94.3; potential range 0–100, higher score = higher satisfaction). MR variables explained 14% of the satisfaction score variation. The worst pain intensity in the first 24 hours postsurgery as documented in the MR was the most powerful predictor of satisfaction. Other predictors associated with satisfaction were younger age, male sex, preoperative education, shorter recovery room stay, analgesic given through oral route, and NSAIDS (compared with other analgesics).

Conclusions: Pain in elderly surgical patients remains Undermanaged, in day surgery too. Simple strategies such as emphasizing preoperative education may have a large effect in pain management. This study developed a validated patient satisfaction score and a MR instrument to assist in monitoring pain management quality at home.

Reference

A103

Wound repair capacity in type 2 diabetes elder patients: assessment by gene expression profiling (GEP) analysis
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Background: Patients with Type 2 diabetes mellitus (T2DM) have an early endothelial dysfunction associated with poor wound healing rate. Diabetic ulcers often fail to heal, and the mechanism is not well explained because studies of ulcer wounds in humans are limited as a result of the difficulty of obtaining tissue samples. Peripheral blood (PB) can be obtained noninvasively and could potentially overcome this problem. The aim of present study was to identify T2DM patients at risk of developing poor healing ulcers.
Materials and methods: As part of our project “Biology and Use of Endothelial Progenitor Cells in Peripheral Occluding Arteriopathy (PAD)”, we enrolled a group of newly T2DM patients (26) without vascular complications and ulcers. As positive controls we studied T2DM patients (27) with peripheral arterial occlusive disease (PAD). Normal controls included healthy donors (27).

Results: We used a TaqMan® Low Density Array based on comparative CTdd CT method on Applied Biosystems 7900HT to perform relative quantification of m-RNA derived from PB samples. Transcriptome included gene products involved in tissue repair events such as fibroblast factors (FGF 1-2), transforming growth factor-β1 (TGF-β1), collagen type XV and type VIII and tissue granulin (GR). Inflammation cytokines (TNF, IFN, IL-6, IL-8 IL21) were also investigated.

We found that diabetic subjects showed an imbalance of GEP as compared with normal controls. Altered levels were observed in fibroblastic and collagen transcripts (p < 0.001) suggesting that loss of the reparative capacity is due to diabetic patients even if clinical signs of tissue damage are absent. Inflammation mediators were strongly increased in both groups of diabetic patients, but IL 8 showed a major expression in T2DM subgroup with PAD (p < 0.000).

Conclusions: We believe that GEP may be a sensitive non-invasive method for the assessment of abnormal repair capacity. Further studies should be carried out, in a larger series, to determine whether patients with diabetes associated with altered GEP should be aggressively treated to reduce the incidence of both micro- and macrovascular complications.

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A104 Geriatrics lymphedema: priority in therapeutic choices
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Background: The lymphedema is particularly common in the geriatric age. Physical treatment in primary and secondary lymphedema is basilar. It is more important to address the proper tailored treatment than it is to define the kind of patient [1,2].

Materials and methods: The AA. observed 465 old patients suffering lymphedema between 2007 and 2009. They show an average decrease of the 26% of the circumference of the limb and a subjective and objective reduction of tissue consistence, above all in fibrotic areas. Side effects such as local irritation were observed; pectechia, hematomas, swelling and low pain 24-36 hours after treatment. Only in 1 patient the suspension of treatment was required. The high resolution echography demonstrated a medium reduction of the skin and epifascial thickness of 32%, corresponding to the clinical observations.

Conclusions: This kind of shock wave therapy is very useful in primary and secondary lymphedema, not only for the decreasing of the limb volume, but above all for the treatment of the fibrotic areas. The technique is easy to apply and can be performed both by the physician as by the physiotherapist. There are no contraindications to the application. The technique can be associate with the other manual and mechanical treatment used for the lymph-drainage.

References

A106 Traumatic injury in elderly: outcomes in emergency care unit
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BMC Geriatrics 2010, 10(Suppl 1):A106

Background: In Italy, trauma has high incidence of accesses in emergency room (ER) and a significant number of affects elderly patients. Postural instability, poor visual function, functional limitation and comorbidity increase the risk of falls.

Materials and methods: Between 2007 to 2008, 1611 elderly patients were admitted in our ER for traumatic injuries with moderate to severe cardiovascular compliance allows the application of techniques in absence of contraindications (heart failure, hypertension).
prognosis. In our department there are an area of trauma with two Shock Rooms, where the Trauma Team evaluates clinical status and vital parameters using a “Trauma Complex table”. Survival probability (Ps) is evaluated by Triss (Trauma and Injury Severity Score) or by ISS (Injury Severity Score) methods.

Results: The most prevalent injuries were: 864 (53.63%) head/facial trauma, 83 (5.15%), thoracic/abdomen trauma. In over 50% of cases have involved single or multiple fractures, associated with major or minor trauma. The incidence of femoral fractures was 16.69% (269 cases), followed by upper limbs 12.78% (206 cases) and ribs fractures 9.37% (151 cases). The incidence of trauma in elderly population remained constant in the two years considered; the highest incidence interests the population with age range 75-84 years old. The majority of the patients was females (65.23%). We have not observed any death in the emergency room.

613 patients (38.05%) were hospitalized, 84 (5.21%) has been transferred in other hospitals. The 38.05% (613) of patients were discharged.

Conclusions: The extension of the middle life increases the risk of home or walking traumatic injuries and the numbers of admission in ER. A correct management of trauma can reduce morbidity, mortality and hospitalization. The correct application of guide lines in Shock Room and the use of Trauma Complex table have allowed us to obtain an absence of mortality in ER. The prevalence of fractures in females, in our view, is related to osteoporosis. Particular attention should be carry out to patients undertaken anticoagulant therapy, because high morbidity was been observed later traumatic events.

References


A107 Cochlear implantation in elderly: indication and results

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BMC Geriatrics 2010, 10(Suppl 1):A107

Background: There is a growing interest by clinical researchers on quality of life and outcomes of cochlear implant patients, particularly considering the extension of indication to the more elderly. This is especially related to the cost-benefit issues in patients were the benefit might be reduced by aging of the auditory system which is a more central process, together with general health problems which might be affected by any surgical procedure. Vermeire and co-authors have reported that although there is no difference between self-reported measure of benefit between patients implanted younger or older than 70 years, still 70-and-over had lower speech perception than younger participants. The aim of the study was to investigate the outcome of CI among elderly cochlear implant recipients.

Materials and methods: A total of 29 post-lingual adults implanted with Clarion 1,2, CIi and HiRes 90K were selected for trials. Group 1 consisted of 9 patients with mean age at implant 76.2 yrs Group 2 consisted of 20 patients with mean age at implant 59.1 yrs. All patients were tested (open-set mode) with bisyllabic words and sentences, in both quiet and noise (speech/noise ratio (SNR) = +10 and 5). Statistical analysis of results was carried out with the student T-test. Testing was carried out after a minimum of 9 moths of cochlear implant use.

Results: Result for speech perception in quiet and in noise showed a tendency for better results in subjects 50-80 years old, nevertheless differences were not statistically significant. Figure 1.

Conclusions: Results from our study have shown that elder patient implanted above 75 yrs can obtain significant hearing benefit from cochlear implantation. Similarly to the results reported by Vermeer, in our study subjects implanted at elder age show lower scores compared to younger adult implantees. Nevertheless differences are not statistically significant, and, more important, the overall results are excellent even though elders require more counselling and attention. Furthermore activities connected to rehabilitation, often required to improve implant use, become inherently an input which favors the patient’s interest and motivation towards everyday life.

Reference


A108 Laboratory markers of diabetes mellitus in the elderly

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BMC Geriatrics 2010, 10(Suppl 1):A108

Background: Diabetes mellitus is a leading cause of morbidity and mortality in Western countries. To prevent diabetic chronic complications, various trials have validated the need for tight glycemic control [1]. Important laboratory markers used in the follow-up of diabetic patients include glycated hemoglobin (HbA1c) [2,3] and microalbuminuria [3], an important predictor of diabetic nephropathy. The aim of this study is to evaluate HbA1c as a significant index of glycemic control, and to determine the prevalence of microalbuminuria in elderly diabetic patients in our geographic area.

Materials and methods: HbA1c levels were measured using a high-pressure liquid chromatography methodology (HA 8160, Menarini

Figure 1 (abstract A107). 1a: speech perception in quiet for bysillabic words and sentences. 1b: speech perception in noise with SNR +10 and 5, for bysillabic words and sentences.
Diagnosed, and analysed in 352 consecutive diabetic patients (age: >41 years) within a two month time period (September-October 2009). The optimal HbA1c target for diabetic patients was considered < 7%, as recommended by the American Diabetes Association. Urinary albumin levels were measured by an immunoturbidimetric assay (BN II, Dade Behring) in 226 consecutive diabetic patients (age: >41 years) within the same time period. Microalbuminuria was diagnosed if albumin in urine samples was > 30 mg/L.

Results: Within the patients examined, the overall HbA1c mean is 6.95% +1.51, and the overall prevalence of high HbA1c (>7%), indicative of poor glycemic control, is 34.4%. Interestingly, the prevalence of patients with high HbA1c is over 30% in any age range examined, with a peak in the age range 61-70 (Table 1). However, while the overall prevalence of microalbuminuria is 19.2%, in agreement with data reported by the Italian Ministry of Health, microalbuminuria is diagnosed in about 8% of diabetics under 60 years, and in almost 30% of patients over 60 years (Table 2).

Conclusions: Our data indicate that a sub-optimal glycemic control is observed in more than 30% of the diabetics examined, regardless of age. Furthermore, our data confirm that older age is associated with an increased risk of microalbuminuria and progressive impairment of renal function.

References

A109 Hematopoietic stem cells for neovascularization and wound repair
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Background: It is now well-known that a critical part of normal healing for cutaneous wounds is the formation of new blood vessels. As implantation of autologous bone marrow (BM)-derived Endothelial Progenitor Cells (EPC) into ischemic limbs has become a promising treatment for moderate to severe peripheral arterial occlusive disease (PAD), we have begun a Phase II randomized trial in Type 2 diabetes mellitus (T2DM). The goal of infusions is to promote neoangiogenesis, thereby increasing circulation, reducing symptoms, and facilitating wound healing. At first, we have studied EPC and gene expression profile (GEP) of peripheral blood, hypothesizing that it is possible to identify useful markers for the assessment of the severity of endothelial dysfunction.

Materials and methods: Using the high-performance flow cytometer FACS Canto, we analysed peripheral blood samples from diabetic patients and healthy donors. We found that T2DM did not affect the number of early EPC, but greatly decreased the number of highly differentiated EPCs. In addition, T2DM increases the presence of both live and dead circulating endothelial cells (CEC), together with an increase in the number of activated CEC. Relative quantification of 96 genes (TaqMan® Low Density Array) has been investigated. Notably, GEP in T2DM was always different from that found in controls. In particular, patients showed abnormal expression of VEGFs, AFGs, MMPs, TIMPs, CXCL12, HIF-1 alpha, IL-8 and AMPK. Computational intelligence methods (NeuCom, WWRKNN and TWINFi) for discovering important information from biological data were used for PAD risk prediction.

Results: Our results suggest that (i) the endothelial damage is due more to an altered process of maturation commitment/homing of EPC than to a simple decrease in their production, ii) CEC could be useful markers for the assessment of endothelial dysfunction severity, (iii) GEP allows early identification of the patients, at risk for PAD development, who might benefit of stem cell therapy.

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Our results suggest that one of the mechanisms that underlies the age-associated alterations in vascular structure and function may be related to a combination of alterations in homing and maturation of EPCs.

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A111
Chronic muscular Pain treatment with Muscular Acoustic Modulator Device in elderly
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Background: Muscles Contractures are an important part of multifactorial etiology of chronic pain. MAM® is an acoustic waves device modulated in power and frequency (0-50 Hz, 0-5 Bar) for treatment of muscular contractures. If the treatment of the chronic muscular contractures with MAM® can improve quality life in elderly.

Materials and methods: We have analyzed the results of a comprehensive examination of 5 over 60 age patients (Group 1: aged 76+/-5.2 years) and 5 control over 60 age patients (Group 2; aged 74+/-2.2 years). Every group was studied with a manual objective examination of the skeletal muscle apparatus to find perceived and evoked contractures reported on a paper map support. This map allows to transfer with accuracy to the physiotherapist who are the points on which he must make MAM® treatment. Group 1: contractures 22.8+/-1.47; Group 2: contractures 23.4+/-2.03. To each group was given a BPI+® (Brief Pain Inventory) to have a review of quality life the first day of examination and at the last day of treatment. Group 1 was treated with an acoustic wave modulator device (MAM®), once a week, for four weeks. Each point was treated three times every sitting (16 sec on which he must make MAM® treatment). Once a week, the treatment was repeated. Group 2 was not treated

Results: We have observed in Group 1 a reduction of contraction points after IV treatment with MAM® and an improvement of quality life value with BPI test taking average of all the averages of VAS respect Group two, as shown in Table 1 and Figure 1.

Conclusions: Treatment of chronic muscular pain with acoustic MAM® device reduces VAS value in BPI from 5.8+/-3.46 to 0.5+/-0.93, reduces of 70% muscular contractures and improve quality life in elderly.

Table 1 (abstract A111)

<table>
<thead>
<tr>
<th></th>
<th>N. pts.</th>
<th>Aged</th>
<th>Contracture points I treatment</th>
<th>Contracture points IV treatment</th>
<th>BPI before</th>
<th>BPI after</th>
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</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>5</td>
<td>76+/-5.2 years</td>
<td>22.8+/-1.47</td>
<td>6.8+/-2.7</td>
<td>5.8+/-3.46</td>
<td>0.5+/-0.93</td>
</tr>
<tr>
<td>Group 2</td>
<td>5</td>
<td>74+/-2.2 years</td>
<td>23.4+/-2.03</td>
<td>24.2+/-1.42</td>
<td>6.4+/-1.27</td>
<td>6.2+/-2.66</td>
</tr>
</tbody>
</table>

A112
Laparoscopic colecistectomy: anesthetistic implications in the elderly patient
A Paratore1,*, O Minutolo2, G Buscema1, L Ferrigno1, V Minutolo2
1L.U.O.C. Anesthesia and Intensive Care Hospital “Guzzardi” di Vittoria (Rg), Italy; 2Department of Surgical Sciences, Organ Transplantations and Advanced Technologies, University of Catania, Via Santa Sofia, 95123, Catania, Italy

BMC Geriatrics 2010, 10(Suppl 1):A112

Background: The gallbladder stone is 20-40% of geriatric diseases. In elderly patients with limited cardiac reserve the pneumoperitoneum determines dangerous alterations of the cardiac output and other hemodynamic variables. The frequent co-morbidity in elderly people leads to a severe prognosis in these patients with surgical high mortality and morbidity rates in open surgery (1) otherwise the laparoscopic procedure is followed by lower mortality and morbidity rates (0.06% vs 1.4%) (2,3,4). The gradual abdominal insufflation to 12 mmHg followed by a limited 10 degree head-up tilt is associated with cardiovascular stability in elderly ASA III patients (5).

The aim of our study was to analyze hemodynamic modifications during surgical treatment by laparoscopic colecistectomy and the anesthetic implications.

Materials and methods: 121 patients aged over 65 years old were analyzed who underwent laparoscopic cholecistectomy. The operation was conducted with a low pressure of CO2 (8-10 mmHg). We observed the hemodynamic trend during the anesthesia: blood pressure, heart rate, respiratory rate, Tidal Volume and end Tidal CO2. Blood gas exchanges were analyzed.

Results: After 15 minutes of pneumoperitoneum the blood pressure was higher (123 ± 18 mmHg) whereas the heart rate was the same. PCO2 and end Tidal CO2 was higher respectively 15 and 60 minutes after pneumoperitoneum. The end Tidal CO2 gap was low (3.5 mmHg) during the surgery. In the postoperative period the blood exchanges showed the same value as the preoperative period while there was no PAO2 modification during the procedure.

Conclusions: Our study showed the safety and the effectiveness of the laparoscopic cholecistectomy in elderly patients. Complications were not observed in the postoperative period.

References
A113
Lymphatic diseases: geriatric epidemiological data: the role of rehabilitation
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Background: In 1994 the WHO showed about 140 millions cases of lymphedema (Table 1). Italian epidemiological studies report that primary lymphedema are more frequent than secondary. The localization of upper limbs recognizes secondary lymphedema; the primary ones can be located in lower limbs. 30-40 y.o. women are more exposed. In geriatric patients lymphedema is generally secondary and concerned with upper limbs (Mastectomy). In lower limbs it follows cervix carcinoma treatments (46%), urologic diseases (39%), melanoma treatments (6%), Hodkgin lymphoma (3%), venous failures etc. In geriatric patients lymphedema disabilities make previous pathologies worse and rehabilitative therapies are recommended.

Materials and methods: In UO Medicina Riabilitativa, Ospedali Riuniti Ancona, Lymphedema is treated through a Rehabilitative Project performed by a Team. The treatments are concerned with patient’s impairments and disabilities, according to ICF.

Results: In 2008, 83 new patients have been examined. 10 males and 73 females. Mean age 57,7 y.o. 25 Lymphedema in over 65 y.o. patients: 24 secondary and 1 primary. The secondary were: 44 post-mastectomy; 21 post surgical operation on pelvis or lower limbs; 8 after CVD; 1 post-radiotherapy; 1 post erysipelas. Tables 2, 3 and 4

Conclusions: This statistics show that in geriatric patients lymphatic system pathologies are often related both to CVD and to surgery (pelvis operations) with inguinal, iliac and lumbar aortic nodes removal.

Table 1 (abstract A113). Statistics WHO 1994

Statistics WHO 1994

<table>
<thead>
<tr>
<th></th>
<th>Total patients</th>
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<tbody>
<tr>
<td>Lymphedema</td>
<td>140 MI</td>
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<tr>
<td>Primary Lymphedema</td>
<td>70 MI</td>
</tr>
<tr>
<td>Parasitic origin (F.B.)</td>
<td>40 MI</td>
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<tr>
<td>Secondary Lymphedema</td>
<td>20 MI</td>
</tr>
<tr>
<td>Functional Problems (CVD)</td>
<td>10 MI</td>
</tr>
</tbody>
</table>

Table 2 (abstract A113). Statistics

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Total patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total patients</td>
<td>83</td>
</tr>
<tr>
<td>Primary Lymph.</td>
<td>8</td>
</tr>
<tr>
<td>Secondary Lymph.</td>
<td>75</td>
</tr>
<tr>
<td>Mean Age</td>
<td>57,7</td>
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</table>

Table 3 (abstract A113)

<table>
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<tr>
<th></th>
<th>Total patients</th>
<th>over 65 y.o.</th>
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</thead>
<tbody>
<tr>
<td>Post-Mastectomy</td>
<td>44</td>
<td>14</td>
</tr>
<tr>
<td>Post-Surg. L.L.</td>
<td>21</td>
<td>4</td>
</tr>
<tr>
<td>Post-CVD</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Post-erysipelas</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Post-Radiotherapy</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 4 (abstract A113)

<table>
<thead>
<tr>
<th></th>
<th>secondary Lymphedemas</th>
<th>primary Lymphedema</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 65 y.o.</td>
<td>25</td>
<td>1</td>
</tr>
</tbody>
</table>

References

LECTURE PRESENTATIONS

SPECIALIZED SURGERY

L1
Head and neck skin carcinoma in elderly: surgical management
F Abbonante
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BMC Geriatrics 2010, 10(Suppl 1):L1.1

Skin carcinoma is the most common of human cancers. Multiple risk factors are recognized, including ultraviolet (UV) and ionizing radiation, chemical carcinogens, chronic wounds, immunosuppression and reduced DNA-repair mechanism.

The tumor occurs most frequently in individuals of 60 year of age and older and predominates in men. Approximately 80% of tumors involve the head and neck regions, with almost 30% affecting the nose. Overall 80% of tumors can be completely eradicated with a simple technique, but recurrences are likely if therapy is not optimal. Recurrent lesions are more aggressive and difficult to treat.

To ensure an adequate therapeutic plan the pathologist’s report should include not only the histological diagnosis and the adequacy of surgical margins but also the architectural variety of the tumor.

The presentation takes into consideration the author’s personal experience in the management of the primary lesions, focusing on the main surgical modality from the excision with adequate margins to skin grafting and flap reconstruction.

The surgical outcome and the main statistics are shown. The skin carcinomas in the elderly are relevant in terms of morbidity and mortality. Early diagnosis and optimal initial treatment are the keys for successful outcome.

L2
Rhinoplasty in the elderly
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BMC Geriatrics 2010, 10(Suppl 1):L2.2

Rhinoplasty in the elderly is a challenging surgery for the risk of complications, especially due to the patient’s age. The surgical outcomes are good even in elderly patients. It’s possible to have a successful outcome. The surgical outcome and the main statistics are shown.
Both functional and cosmetic rhinoplasty in the elderly require a different surgical approach due to the morphological and structural changes of the nose that are connected to the aging process. Such processes determine changes of all anatomical structures that form the aesthetic-functional unit. In particular, thinning of the skin envelope becomes apparent with pores dilatation and increased secretion of sebum, in males in particular, subcutaneous tissue involution and thinning of muscle layers with weakening of cartilages. All these involutional anatomical changes that become apparent with the aging process, demand a less aggressive surgical approach with greater respect and attention of the anatomical structures. When compared with the younger patient, the relative structural hypotrophy of the anatomy of the elderly, makes even minor changes and small imperfections become more apparent. What we mean by elderly patient requires clarification. In the majority of cases a rhinoplasty is carried out on patients between age 18 and 40. The fact that a patient should be defined old when he/she reaches a certain age in not axiomatic. A person can feel “old” even when he/she is 35-40 years of age, obviously concealing a certain degree of psychological problems. This fact should induce the surgeon, before operating, to well consider the psychological motivations of the patient who requests this surgical procedure at an advanced age and to consider why he did not request this procedure earlier. On selected cases a psychological consultation can be of great help to better understand the patient and can protect the surgeon from unpleasant litigation.

The most obvious phenotypical consequences of the aging process are represented by nasal tip ptosis and alar cartilages collapse with consequent alteration of the air flow further aggravated by progressive thinning of the mucous layer and relative glandular atrophy. From a cosmetic point of view, the aging of the face determines a reduction of the vertical dimensions of the lower third of the face together with a lengthening of the middle third made even more obvious by the lowering of the tip of the nose and the distraction of the lower lateral cartilages.

We believe that a rhinoplasty is a subtractive operation only being augmentative in selected secondary conditions. It is a tenet of this discipline that in a rhinoplasty what is removed is just as important as what is being left. We believe that performing a rhinoplasty in the elderly demands consideration of the psychological implications and from a technical standpoint greater care in performing all resections in view of the thinning of tissues and of the underlying anatomical structures. The main objective of a rhinoplasty in the elderly should be an adequate reorientation and stabilization of the lower lateral cartilages to achieve a positive tip rotation and an adequate projection.

L3 Ageing and head and neck cancer

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BMC Geriatrics 2010, 10(Suppl 1):L3

In the last decades head and neck cancer incidence has risen in the elderly (>70 years) as a consequence of the increased average lifespan. Two main mechanisms have been suggested to explain the increase in cancer incidence with ageing: the first refers to prolonged exposure to carcinogens during life and the second explanation seems to be attributed to the individual vulnerability to cancer with age.

To suppress the development of cancer two main strategies are involved: one uses Caretaker proteins to protect genome from mutations and the other uses Gatekeeper proteins to eliminate or prevent the growth of mutated cells. Recently studies on ageing have shown a correlation between ageing and an increase in the mitochondrial production of Reactive Oxygen Species (ROS) and between mitochondrial function decline age –associate and mitochondrial DNA (mtDNA) mutations. Mitochondrial DNA mutations have been found to be implicated in the head and neck cancer multistep process. So, future strategies that prevent mtDNA damage or improve DNA-repair mechanisms are likely to decrease susceptibility to cancer with age.

L4 Antiangiogenic therapy

T Avitabile

Directo department of Ophthalmology, Santa Marta Hospital, Azienda Policlinico-Vittorio Emanuele, University of Catania, Italy

BMC Geriatrics 2010, 10(Suppl 1):L4

A brief look at AMD and developments which have completely subverted the therapeutic approach to patients affected by this disease.

New therapies available include: monoclonal antibody inhibitors of VEGF (Pepitagianib, Bevacizumab, Ranibizumab) with the protocols currently in use and a brief reference to new anti-angiogenic therapies that include: decoy of VEGF receptor (VEGF Trap, Small Interfering RNA based therapies, Bevasirbanib and AGN211745, Sirolimus) and the VEGF cascade of tyrosine kinase inhibitors (Vatalanib, Pazopanib, TG100801, TG101095, AG013958 and AL39324).

L5 Prevention strategies of most common female cancers

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BMC Geriatrics 2010, 10(Suppl 1):L5

Each year, the American Cancer Society (ACS) publishes a report summarizing its recommendations for early cancer detection, data and trends in cancer screening rates, and selected issues related to cancer screening.

For endometrial cancer: The ACS recommends that women at very high risk for endometrial cancer due to 1) known HPNCC genetic mutation carrier status; 2) a substantial likelihood of being a mutation carrier (ie, a mutation is known to be present in the family); or 3) the absence of genetic testing results in families with a suspected autosomal dominant predisposition to colon cancer should consider beginning annual testing for the detection of early endometrial cancer at age 35 years.

For cervical cancer: Screening for cervical cancer should begin approximately 3 years after first vaginal intercourse, but no later than age 21 years. Until age 30 years, women at average risk should receive either annual screening with conventional cervical cytology smears or biennial screening using liquid-based cytology. After age 30 years, a woman who has had 3 consecutive technically satisfactory Papanicolau (Pap) tests with normal/negative results may choose to either undergo screening every 2 to 3 years.

For ovarian cancer: The guidelines recommend that women at average and increased risk should be informed about the high genetic risk. High-risk family histories with an elevated risk of developing ovarian cancer include >2 breast cancers and 1 or more cases of ovarian cancer at any age, >3 cases of breast cancer before age 50 years, sister pairs with cancers less than age 50 years, cases of breast cancer occurring at or before age 40 years. Preventive Surgery (bilateral salpingo-oophorectomy) can reduce risk of ovarian and fallopian tube cancers for BRCA1, BRCA2 carriers and might improve survival rates in women carrying the BRCA1 or BRCA2 genes by about half a year to over two years.

For vulvar cancer: The guidelines recommend that women at average and increased risk should be informed about the risk factors: the majority of women diagnosed with vulvar cancer are older than 50. However, a significant percentage (15%) of women under 40 develop vulvar cancer. Generally, vulvar cancer in younger women is associated with HPV infection and smoking; women with lowered immune systems have a higher risk of developing vulvar cancer; about 4% of women with lichen sclerosus develop vulvar cancer.

L6 The phlebological surgery in elderly patients

G Bottà1, G Baldoni1, R Serra1, S de Franciscis2

1University of Siena, Department of Surgery, Center of Research, Therapy and Phlebomorphological Rehabilitatio, Italy; 2University of Catanzaro, Department of Experimental and Clinical Medicine, Italy

BMC Geriatrics 2010, 10(Suppl 1):L6
The pathogenesis of the lower limbs varicose veins in the elderly patients is the same as in the juvenile and adult age. What changes is the severity of the clinical picture, because the disease is a chronic pathology and it is aggravated with the passing of the years in absence of prophylaxis and missed or inadequate therapy. Equally the surgical operations on the superficial venous system of the elderly patients from a technical point of view are the same that are practiced in other ages of life. What changes is the anaesthesiological risk, which is increased, because other chronic pathologies are frequently associated with the old ones. Currently both the use of techniques of peripheral anesthesia, as the blocks of the lower limbs nervous trunks, and the introduction of poor toxic anesthetics for the heart in therapeutical practice allow in an incisive way to submit elderly people to surgical procedures. Above all the out-patient hemodynamic surgery of the superficial chronic venous insufficiency, which requires a careful and meticulous instrumental investigation aimed surgical gestures, but simple, effective, of brief duration, has convinced many surgeons of the possibility to operate on the varicose patients of a more and more advance age. On the other hand the rapid postoperative mobilization of those sick, in absence of immediate complications, means that they can be discharged from the hospital on the same day of the operation. This undoubtedly involves positive reflexes on the sanitary expense and it increases at the same time the compliance in terms of motivation and acceptance of the proposed procedure. The elderly patient, perhaps more than the younger adult, once informed of the new anaesthesiological and surgical techniques, gladly gives his consent to the intervention, pleased to return to his own house and quickly return to his daily occupations. How much I dictate you is translated in our experience, that is carried out near the Phlebological Center of the Siena University, in a progressive increase in the last 5 years both in absolute terms (223) and percentages (12%) of the number of subjects older than sixty-five years old that have been submitted to surgical operations for the venous disease. Of all 223 patients, males are 68 and females are 155; 144 of them have an age between 66 and 70 years, 73 belonging to the eighty years of life and 6 subject to the niny. All patients have been operated in Day Hospital admission. No mortality has been found. Local postoperative complications was encountered in 1,8% of the cases.

L7
The pathophysiology of aging bone jaw: primary and secondary prevention
G Campisi
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The skeleton is composed of approximately 200 bones, and it is the backbone of our body along with ligaments and joints. The bone is not a static but a dynamic structure, constantly reshuffling, that may suffer fractures due to trauma, despite their particular hardness and strength. Complex physiologic mechanisms, sometimes with the help of surgery, can lead to bone regeneration. In the elderly, often, the skeletal system can be affected by osteoporosis, a "silent disease" that causes fragile bones especially of the vertebrae and femur; its contributing factors are menopause (in women), smoking, nutritional deficiencies, systemic diseases or prolonged use of drugs. The masticatory apparatus and its main functions of chewing, speech and swallowing are affected by osteoporosis with the same percentage of the skeleton, and in many studies the relationship between systemic osteoporosis and loss of alveolar bone and teeth has been linked [1]. For reducing the health impact and social of a disease mostly asymptomatic, progressive and highly disabling condition such as osteoporosis, promoting health and raising public awareness of the benefits associated is a priority, with the adoption of healthy lifestyles in a vision that embraces the entire course of life. Osteoporosis prevention should start at the pediatric and adolescent age thanks to the intake of appropriate foods (calcium, vitamin D) that are absorbed by the complete organism and are involved in the consolidation of bone mass. It should be a distinguished primary prevention (to prevent the fracture) from secondary prevention (to avoid re-injury after a first fracture event).

Although many points are still to be clarified in terms of both therapeutic and physiological profiles, early diagnosis and implementation of preventive rules are necessary for reducing the risk of fractures also in the maxillary bone.

Reference

L8
Endovascular treatment in peripheral arterial disease
A Conti*, M Mazzei, F Morrone, P Piro, E Scarcello, S Tarstano, P Perri, F Intrieri
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Endovascular treatment thirty-three after the first published report on angioplasty, continues to be a rapidly evolving field for the treatment of patients with peripheral arterial disease. A multitude of studies detailing technical improvements and innovative developments have been published. The morphology of a lesion may have an influence on the technical outcome, results at follow up and also risk of treatment. The TASC (TransAtlantic Inter-Society Consensus) document introduced a classification system that categorised lesions with regard to their accessibility to either percutaneous treatment or surgery. It categorised lesions into four types with: type A lesions ideal for endovascular approach; type B lesions where endovascular approach is still the preferred technique; type C lesions where surgical approach is preferred and type D lesions where surgery is the option of choice. Today, endovascular practice, percutaneous transluminal angioplasty (PTA) with or without stenting, is used far more frequently for all types of lower extremity occlusive lesions, reflecting the continuing advances in imaging techniques, angioplasty equipment, and endovascular expertise. The role of endovascular intervention, PTA/stenting, in the treatment of peripheral arterial disease is also expanding, and its promise of limb salvage and symptom relief with reduced morbidity and mortality makes an attractive alternative to surgery and, as most endovascular interventions are performed on brief hospitalizations, hospital costs are cut considerably. Compared with open surgical procedures, endovascular interventions offer comparable or superior long-term rates of success.

References

L9
Regeneration of inner ear sensory epithelium using stem cells: state of art
A R Fertoni*, G Paludetti
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Contemporary research efforts have provided new insight into the processes underlying common hearing impairments including aging, genetic defects, and environmental stress such as excessive noise (NIHL) or chemotherapeutic drugs. The primary cause of hearing impairment involves the death of sensory cells (hair cells) and neurons in the cochlea which are irreplaceable in mammals. Rehabilitative measures have traditionally been based on technical solutions: hearing aids and cochlear implants that can minimize the social impact of impairment,
however the challenge for a successful hearing rehabilitation is definitely the prevention of cell death or regeneration of the sensorineural cells and neurons after cochlear damage. Addressing experimentally the first issue, we have shown that noise exposure and ototoxic drugs lead to apoptosis and, by using neurotrophic factors and anti-apoptotic drugs as well as antioxidants, we have developed several therapeutic approaches of protection thus limiting the damage to the inner ear [1-3].

One of the most exciting areas involving hair-cell regeneration concerns regeneration of hair cells with the use of stem cells. The discovery of both adult and embryonic stem cells in the cochlea and evidence that they can be converted into hair cells raise hope for the development of stem-cell based treatment regimes to regenerate damaged cochlear components. Potential cell sources for inner ear transplantation include fetal dorsal root ganglion cells, neural progenitor cells, stem or progenitor cells isolated from inner ear, immortalized auditory neuroblast cells, embryonic stem cells (ESCs) and their derived neuronal cells, and marrow stromal cells and finally stem cells arising from amniotic fluid and placenta and oillary progenitors [3,4]. Principal obstacles for the clinical application remain the effects of immunosuppression, induced-carcinogenesis and teratoma formation observed in the experimental models [3,4].

References

L10
Treatment of proximal femoral fractures
G Gasparini1, B Iannio, F Di Lugo, A Cundari
Clinica Ortopedica Universita degli Studi Magna Graecia. Catanzaro, Italy
BMC Geriatrics 2010, 10(Suppl 1):s10

Femoral fractures have to be considered frequent causes of hospital admission for the elderly. These fractures are characterized by an uncertain prognosis in terms of both morbidity and mortality. The management of proximal femoral fractures in the elderly should be multidisciplinary, indeed the fall causing the fracture might follow a neurological, metabolic or cardiovascular disorder. Thus the treatment of the hidden disease is mandatory prior to fixing the fracture. Furthermore any unknown disease could significantly affect the health status of the patient increasing the operative risk. At admission to hospital accurate case history and physical examination have to be recorded. These fractures have to be surgically treated whenever it is possible. Indeed, the conservative treatment is a burden with a lot of complications. The early surgical treatment (within 24 hours from the injury) is effective to reduce complications and mortality. When choosing the appropriate surgical treatment, a preliminary distinction among the medial fractures (subcapital and transcervical) and the lateral ones (basal, intertrochanteric, subtrochanteric) is done. Medial fractures usually cause the interruption of the lateral epiphysis blood vessels with consequent avascular necrosis of the femoral head thus requiring a hemi- or total arthroplasty. Lateral injuries should be treated preferably by reduction and internal fixation. The latter fractures may in turn be divided into two subgroups on the basis of integrity of the medial femoral region near the lesser trochanter (stable fractures). Stable fractures can be fixed with a dynamic hip screw, whereas unstable fractures are usually treated by means of a proximal femoral nail. Early surgical treatment allows resumption of walking, and a sudden recovery of the patient’s autonomy. However the mortality rate of patients with proximal femoral fracture is higher than the mortality rate of an age and sex-matched population.

L11
Osteoporosis: a 3rd millennium disease
E Ippolito1, F Farsetti, D Lecce
Department of Orthopedic Surgery, University of Rome "Tor Vergata", Rome, Italy
BMC Geriatrics 2010, 10(Suppl 1):s11

Osteoporosis is currently considered a skeletal disease characterized by a diminished resistance of bone tissue, which predisposes to a greater risk of fractures. This disease, which affects mainly postmenopausal women, is constantly increasing, especially owing to a longer life-span; reliable epidemiological studies have reported that all over the world there are more than 200 million osteoporotic subjects. Osteoporosis is evaluated by calculating bone mineral density (BMD), analyzing bone quality, and estimating risk factors. BMD is calculated using DEXA (Dual-Energy Xray Absorptiometry), QCT (Quantitative Computed Tomography), and QUS (Quantitative Ultrasoundography). The analysis of bone quality includes various factors such as microarchitecture, geometry, bone turnover, mineralization, and the properties of collagen and the extracellular matrix. The most common risk factors for osteoporosis are hereditary predisposition, sex, age, early menopause, smoking, use of corticosteroid drugs for long periods of time, malabsorption, and endocrine disorders. The orthopedic surgeon is increasingly more involved in treating so-called fragility fractures caused by osteoporosis. The sites most frequently affected by these fractures are the femoral neck, the proximal part of the humerus, the vertebrae, and the distal part of the radius. Currently, fragility fractures are often treated surgically by using devices, which allow obtaining stable internal fixation in a less resistant bone and early joint mobilization. In fact, the study of the most recent surgical devices has been oriented toward finding materials with osteoconductive and osteoinductive properties, which can be used while respecting and supporting the bone’s regenerative capacity. As far as medical treatment of osteoporosis is concerned, the most widely used drugs are bisphosphonates, peptides of the parathyroid hormone, selective modulators of estrogen receptors, and strontium ranelate. At present, the researchers involved in this problem are studying new drugs which not only treat the disease but can also be used to support the healing process of fractures in osteoporotic patients including those treated surgically, thereby enhancing the bone tissue’s regenerative potential and improving its mechanical properties.

L12
Functional neurosurgery in Parkinson’s disease therapy
A Lavano
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BMC Geriatrics 2010, 10(Suppl 1):s12

During the last decade surgical therapy of Parkinson’s disease has been considerably revalued and electrical stimulation techniques have taken the place of neurolesive techniques. Surgical therapy objective is not a direct solution of the illness cause but to control the symptoms responsible for serious daily life limitations.

Electrical stimulation techniques actually used in PD are Deep Brain Stimulation [1] and Motor Cortex Stimulation [2] Advantages of such techniques in comparison with neurolesive techniques are reversibility and adaptability.

Deep Brain Stimulation is indicated for patients with PD in which symptoms are not controlled by the pharmacological therapy or that suffer from L-Dopa serious collateral effects.

Stimulation system determines high frequency stimulation of anatomic-target structure of motor circuit with consequent functional block. Implanted system is formed by lead and pulse generator. Lead can be stereotactically implanted, monolateral or bilateral, at level of: a) Subthalamic Nucleus for all predominant illness symptom control (tremor, rigidity and akinesia) and L-dopa induced dyskinesias; b) Internal Globus Pallidum for the control of the rigidity and of the dyskinesias, c) Vim Thalamus Nucleus for the exclusive control of tremor.

Motor Cortex Stimulation is a technique alternative to DBS indicated in advanced-complicated PD in cases of exclusion from DBS or of its inefficacitv. Paddle lead is installed with neuronavigation system in
epidural or subdural space beyond the motor area, contralaterally to the side where parkinsonian symptoms are prevailing. Stimulation effects are bilateral and stimulation is made with low frequency.

Deep Brain Stimulation allows importing benefits suppressing PD symptoms, extending periods in which patient recovers normal and adequate functionality, reducing collateral effects induced by L-Dopa, improving quality of life and decreasing drugs intake.

Despite the still limited experience, Motor cortex stimulation is effective in a special way on axial symptoms and also on cognitive performances and autonomic signs.

Deep Brain Stimulation and Motor Cortex Stimulation are valid choices for advanced PD therapy. Advantages of such techniques in comparison with neurolesive techniques are safety, reversibility and adaptability.

References

L13

Laparoscopy and anatomic and/or functional defects of pelvic floor
S Palomba, R Oppedisano, C Materazzo, R Venturella, A Falbo, F Zullo
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BMC Geriatrics 2010, 10(Suppl 1):L13

Ideally each correction of pelvic floor dysfunction may be performed through laparoscopy, even if, in the clinical practice, laparoscopy is an elective route only for few procedures.

Laparoscopy has been largely used for urinary incontinence treatment. After initial experiences performed with simplified techniques, due to high failure rate, it has been abandoned. On the contrary, new evidence-based data have showed that laparoscopy efficacy is similar to laparotomy if performed with the same surgical technique, consisting in at least two sutures for each side [1,2].

However laparoscopic colposuspension for stress incontinence has the same limits and complications as laparotomic. In particular, high rates of posterior defects have been detected, due to non-fisiological widening of posterior pelvic spaces, so a cul-de-sac obliterate technique should be always associated.

Laparoscopy is reaching an important role in apical defects, both for the prolapso of vaginal vault and uterus, both pure and complex. Surely surgical times of laparoscopy are statistically and clinically much longer than for laparotomy, requiring an operative experience not pertaining to the common laparoscopist. Laparoscopic correction advantages are well known, especially for young patients in a fertile age wanting to keep their genital sphere and reproductive potential. In case of patients with a uterine prolapso not wanting to retain uterus, subtotal hysterectomy is commonly employed. It simplifies the technique, colposuspension in fact is performed anchoring cervical core, and is potentially associated with reduced complication rate, not including vaginal opening. In cases of pure apical defect essential steps are the 2-3 cm exposure of anterior and posterior fascia of the vault and its anchorage to sacrum. On the contrary, when apical defect is part of a complex dysfunction, exposure and protection with mesh of anterior vaginal wall to bladder pillars and of posterior one to the ano-rectal junction are necessary, and an anti-incontinence procedure and an obliterator procedure should be always associated.

Conclusions: Laparoscopy is a feasible approach for pelvic floor dysfunction correction. Further data are necessary to obtain definitive conclusions.

References

L14

Is there any chance for microsurgical reconstructions in elderly?
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BMC Geriatrics 2010, 10(Suppl 1):L14

In Italy there is a increase in the percentage of population aged over 65 with a gradual increase in average life expectancy (Table 1).

Some studies show that septuagenarians have a greater chance of survival than octogenarians postoperatively and a lower incidence of mortality perioperatively [1]. Recent studies show that elderliness is not an independent risk factor for microsurgical complications, but it is related to increased incidence of medical complications, particularly in patients with more ‘comorbidities’ and with a higher American Society of Anesthesiologists status [2]. The need of considering some important aspects during the preoperative phase is important in evaluation of an elderly to be subjected to a microsurgical operation.

These factors are: prolonged operation time due to microsurgical anatomomysos; donor site morbidity; condition of recipient vessels. In order to satisfy these criteria, some therapeutic devices could be advanced such as perioperative prophylactic anticoagulation [3]. The indications for microvascular free tissue transfers (MFTT) in the elderly are different from those in the young: post car-traumas are treated in lower extremity, risks to which an elderly is less exposed. Moreover they are not common operations because elderly vessels are more affected by vascular diseases; in trunk, elderly rarely requires reconstruction. MFTT made in head-neck district are the same in percentage as the ones made on the young: if we have a loss of tissue, reconstruction must be immediate in both. Moreover the recipient vessels are less affected by atherosclerosis than peripheral vessels. The percentage of surgical complications is equal in both.

Conclusions: The limit in MFTT on an elderly patient is not imposed by the technique used but by the request of the patient and by the status of his vessels. If a patient’s medical problem doesn’t represent a handicap, MFTT can be safely performed in the elderly by using proper techniques and precautions.

References

L15

Osteoemlysis in elderly patients
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Older adults are predisposed to osteoemlysis either because of an increased incidence of associated disorders (e.g., peripheral vascular disease, diabetes mellitus, malnutrition and poor dentition) or because of

Table 1 (abstract L14). Mean of average life expectancy

<table>
<thead>
<tr>
<th>Age</th>
<th>Man</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>70-75</td>
<td>11,8</td>
<td>15</td>
</tr>
<tr>
<td>75-80</td>
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<tr>
<td>80-85</td>
<td>6,8</td>
<td>8,7</td>
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<tr>
<td>&gt; 80</td>
<td>5,1</td>
<td>6,3</td>
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surgical procedures that are frequently performed in the elderly population (e.g., dental extractions, open-heart surgery, and prosthetic joint replacement or osteosynthesis).

Two types of haematogenous osteomyelitis that are seen in the elderly are vertebral and long bone osteomyelitis. The most common pathogen is Staphylococcus aureus. Osteomyelitis secondary to contiguous foci of infection can occur in older adults without vascular insufficiency (secondary to pressure ulcers) or with vascular insufficiency due to diabetes mellitus or peripheral vascular disease from atherosclerosis.

Chronic osteomyelitis may be defined as osteomyelitis that has a duration of more than 6 weeks or that recurs or is not cured after the initial infection. Chronic osteomyelitis may be associated with certain surgical procedures (e.g., sternal osteomyelitis after open-heart surgery or implant-related infections after orthopaedic and traumatological procedures), poor dentition or dental extraction (mandibular osteomyelitis), and, more commonly, with systemic disorders (e.g., peripheral vascular disease and diabetes mellitus).

Acute osteomyelitis can in some cases be cured with antimicrobial therapy alone but surgical management is often required and includes extensive debridement, obliteration of dead spaces, stabilisation, adequate soft tissue coverage, and restoration of an effective blood supply.

Chronic osteomyelitis may be caused by S. aureus or coagulase negative staphylococci, but is often due to gram-negative organisms. Because of the presence of infected bone fragments without a blood supply (sequestra), cure with antibiotic therapy alone is rare, if ever, possible and adequate surgical debridement is the cornerstone of therapy.
Bone repair and bone mineral density may be significantly retarded and may be corrected by eliminating risk factors, supplementing the diet with calcium, bisphosphonates, and/or vitamin D, and treating with testosterone and/or estrogen when deficient. Sodium fluoride treatment and anabolic steroids may be used as alternatives.

Septic arthritis is a medical emergency, and prompt recognition and rapid and aggressive treatment are critical to ensuring a good prognosis. The treatment of septic arthritis includes appropriate antimicrobial therapy and joint drainage.

Adverse effects of prescribed antibiotics occur more often in the elderly patient than in young adults. The physician can help to minimise the incidence of adverse effects and improve outcomes by being aware of the principles of clinical pharmacology, the characteristics of specific drugs, and the special physical, psychological and social needs of older patients. Figure 1, 2, 3, 4.

L16
Indications to surgical treatment in varicose veins
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There isn’t a consensus to the treatment of varicose veins because we don’t have randomized controlled trials [1].

Indication to the treatment is based on different criteria: etiological, clinical and diagnostic. The treatments include: conservative therapy, sclerotherapy, phlebectomy, endovenous laser therapy, radiofrequency ablation, and surgery involving saphenous ligation and stripping [2].

Short-term advantages appeared to be associated with sclerotherapy and endovenous treatments, and long-term effectiveness was more apparent following surgical intervention. Evidence suggests conservative therapy is less effective than sclerotherapy and surgery for the treatment of varicose veins. Ligation with stripping plus phlebectomy is generally regarded as the “gold standard” for treating primary long saphenous veins. Sclerotherapy and surgery both appear to have a place in the management of varicose veins. Sclerotherapy and phlebectomy may also be more appropriate in patients with minor superficial varicose veins not related to reflux of the saphenous system or as a post- or adjunctive treatment to other procedures, such as surgery. Current evidence suggests endovenous laser therapy and radiofrequency ablation are as safe and effective as surgery, particularly in the treatment of saphenous veins. Most importantly, the type of varicose vein should govern the intervention of choice, with no single treatment universally employed [2].

Conclusions: The indications are in evolution. It is very important to use a duplex scan before the treatment. The results of the laser at 3 years and of the radiofrequency at 5 years are similar at surgery but the techniques are less invasive. In the future, sclerotherapy can be better surgery in particular cases [3].

References

L17
The US imaging in the management of abdominal aortic aneurysm: perspective
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The development of surgical techniques depends on the concomitant development of imaging techniques. Imaging with ultrasonography (US), computed tomography (CT) and magnetic resonance imaging (MRI) is evolving at rapid pace. The basic need for treatment is mainly important for the endovascular aortic repair (EVAR) that requires information about many different anatomical aspects regarding aneurysmal neck, renal arteries, and diameter of aneurysmal free lumen, aortic bifurcation, diameter and length of iliac vessels.

At present, the development of color-Doppler instruments is surely comparable with that of CT and MR imaging, and an important development has been made also for different types of ultrasonographic contrast medium. The intravascular US (IVUS) mode appears particularly important, that allows real-time detection of a lot of information useful in EVAR.

At present, in elective treatment US examination plays a role in different steps:
- diagnosis
- AAA classification (below, iuxta or suprarenal AAA)
- per operative management with IVUS mode [1]
- postoperative follow-up.

In emergency, the US examination has a place first of all as a bedside exam for patients with a suspected ruptured abdominal aortic aneurysm (rAAA).

In haemodynamically stable patients the firstline US examination appears mandatory during an examination of patients to detect the AAA and to avoid misdiagnosis or, in the opposite case, to abstain from undue X-rays exposition. Actually the physical examination allows the detection of an AAA in about 43% [2] of the patients, and its sensibility results lower for an iliac aneurysm, whereas that of US is up to 99% [3]. In haemodynamically instable patients emergency US exam appears at present the only possible evaluation in the immediately preoperative stage, as the CT exam provides an obligatory and dangerous delay. Moreover in haemodynamically instable patients an emergency IVUS exam could integrate the angiography during endovascular treatment of rAAA to better detect needed information [1], but physicians, nurses, and technicians need to work through a learning curve in order to properly interpret the images generated and maximize the usefulness of the technology.

Hypothetically abdominal US through a friendlier learning curve could integrate the angiographic valuation to better define the outer diameter and the parietal features of the aortic neck, as the angiography does not reveal localization and extent of the thrombus and/or calcification.

References

L18
"Less invasive" surgery in the treatment of cutaneous chronic ulcers of the lower limb in elderly
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BMC Geriatrics 2010, 10(Suppl 1):L18

The role of treatment of vascular lesions of the legs is very important in the elderly. Pain, inability, bandages, periodicity of medications can seriously interfere with a good quality of life because of the lower compliance of geriatric patients to accept a surgical approach. To allow a new approach to vascular lesions the Authors propose a guideline in which the topic of "less invasive" surgery is underlined based on their pathophysiological causes.

Patients affected with lesions of the legs are addressed to the Leg Ulcers Centre by general physicians and selected on the basis of age and comorbidity to propose a therapeutic plan. General conditions, evaluation of lesions healing and of quality of life are correlated to final target (acceptable quality of life). The first step includes a surgical examination and cardiological, nephrological, neurological examinations. The following steps are different for pathologies (see Flow Chart).

PAD (Peripheral Arterial Disease): The target is the limb revascularisation. It can be allowed by endovascular techniques. Vascular
Figure 1 (abstract L18)
evaluation is obtained by an ultrasonographic study followed by an Angio-Tc study of the arterial district. In diabetic patients endovascular techniques are used to obtain therapeutic windows in which skin closure occurs.

Prostacyclin and prostanoids are very useful in those patients in which a surgical procedure is not possible. They can be administered by e.v. at low doses for 2-3 days using a reservoir. Open surgery is restricted to revascularization of profunda femoral artery.

Venous insufficiency: The target is to decrease venous hypertension in the lesion district. Surgery is useful to heal the lesion, but also to prevent recurrency and to decrease elastic compression.

For a surgical approach an haemodynamic map is necessary to propose operations (see Figure 1).

Topical treatment of the ulcer: Surgical debridement of the ulcer can be obtained under local anesthesia using anesthetic ointment. According to the patient’s compliance homologous skin grafts or dermal substitutes can be used with good results.

Amputations: Minor amputations allow antidolorific drugs administration to be decreased. The final result can be accelerated by reconstructive plastic surgical procedures or by implant of homologous skin grafts.

All patients have accepted surgical treatment and when necessary another option. The Authors suggest the role of the internist and of the anesthesit in the management of different comorbidities and the use of less invasive techniques, underlining that this is a proposal to obtain a guideline for the therapy of skin lesions in the elderly.

**INTERNAL MEDICINE**

**L19**

Nodular thyroid disease in the elderly

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The occurrence of thyroid nodules increases with age [1]. In geographical areas with a normal iodine intake, approximately 10% of the population develops a palpable thyroid nodule. This proportion increases in areas with insufficient iodine intake. Non-palpable thyroid nodules are usually diagnosed by a neck echography carried out for various reasons and are 5-10 folds more common than palpable nodules.

When evaluating a thyroid nodule, we must be aware that two conditions require particular attention: a) the possibility of a “hot” (hyperfunctioning) nodule, which can induce thyrotoxicosis; b) the possibility of a malignant nodule.

Both these pathological conditions increase with age [2,3]. In particular, elderly patients often show a multinodular goiter, where both hyperfunctioning nodules and hypofunctioning nodules suspicious for malignancy may coexist. When FT3 is high and/or TSH is suppressed a hyperfunctioning nodule should be suspected. In order to confirm this diagnosis the patient should carry out a thyroid scintigram. In the case that both FT3 and TSH are in the normal range, the nodule should be regarded as non-functioning. In this case a thyroid scintigram is not useful whereas a fine needle aspiration (FNAB) is the diagnostic procedure of choice [4].

Both hyperfunctioning and malignant thyroid nodules are more common in elderly patients. Notably, hyperthyroidism is a more serious condition in the elderly than in the young because of an increased risk of cardiac dysfunction. Moreover, thyroid cancer behaves more aggressively in elderly patients. In these patients thyroid cancer is usually less differentiated and lacks the ability to concentrate iodine. Therefore, thyroid cancer metastases cannot be treated with radiodine.

In the case of a hyperfunctioning nodule the therapy of choice is a thyroid lobectomy. In contrast, in the case of a multinodular goiter or of a malignant nodule, a total thyrodectomy is required.

References


**L20**

Recurrent respiratory infections in elderly

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The physiological aging of the respiratory apparatus and the prolonged exposure to harmful agents, spread by the ventilation, cause the remodeling of the osteo-cartilaginous tissue and the hypertrophy of the nasal mucosa; these pathological changes alter the mechanism of defense and above all compromise the muco-ciliary clearance.

Bacteria are in great measure hygroscopic, so once they are carried in the respiratory tract, they tend to increase their volume and became more susceptible to phagocytosis. Although the macrophage activity is preserved, IgM concentration progressively tends to decrease, therefore reducing the primary response to infection and inducing a decline of cell-mediated immunity.

All the normal mucosal secretions contain iron binding protein. The availability of this element powers the virulence of many microorganisms. The host responds with the release of transferrin trying to remove iron from the invading organisms. This mechanism is completely absent in the elderly.

In the older population the incidence of respiratory tract infection is higher that in the younger. Often, the bacteria involved in the infection are not easy to be detect. The material which can be used to isolate the microorganism can be the expectorated mucus or the mucus aspirated from bronchi. Further more, ‘mixed infections’, caused by the presence of both viruses and bacteria, complicate the primary isolation.

Comparing the difference between outpatients’ and inpatients’ infections agents, we have noticed an increased prevalence of multi-bacterial infection in hospitalized patients. Patients often report that they have tried multiple antibiotic therapies, without clinical response, before the isolation practised during hospitalization; this practice reflects on the isolated strain and causes antibiotic resistances.

It’s very interesting to study the trend of TB infection in the elder patients. It is worth noting that the TB infection usually has a bimodal performance. The first peak in the third decade of life and the second in the sixth decade. Both the infection and the endogenous re-infection can appear. In cohabitation with children, problems are exacerbated more by viral than by bacterial agents.

Finally, the choice of the better antibiotic therapy, characterized by clinical benefits and minimal side effects, is driven by the patient conditions, the severity of the infection, the identification (certain or presumed) of the responsible micro-organism and the way of administration which can offer a safe and rapid bioavailability.

**L21**

The impact of comorbidity on medication adherence and therapeutic goals

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Introduction: Prescribing medications is often challenging in older people with multiple chronic diseases. Non-adherence to prescribed medications is among the most important problems, so that many people are not benefiting properly from the drugs they are prescribed. Additionally, this also represents a costly waste for health services [1].
Comorbidity and medication adherence: Poor adherence to the prescribed therapy is highly prevalent in older patients. Prevaling evidence suggests that age per se should not be considered as a risk factor for poor adherence [2]. Lower educational level, less affluent economic status, cognitive/physical impairment, being assisted by foreign caregivers, and some chronic diseases, such as chronic renal failure, are commonly reported poorly modifiable correlates of non-adherence. Regimen complexity represents a to some extent modifiable correlate [2]. Vision impairment, reduced manual dexterity, and patients’ perception of medication importance may contribute to determine the relationship between regimen complexity and non-adherence. There is minimal evidence to support interventions that improve medication adherence, and the effects of psychosocial interventions are largely unknown [1].

Therapeutic goals in patients with multiple chronic conditions: Patients with multiple chronic conditions may vary in regard to their opinion about health outcomes such as longer survival, prevention of disease-specific events, physical and cognitive function, and tolerable risk of adverse drug reactions. A paradigmatic example of how challenging this issue can be in clinical practice is the difficulty in rational prescribing for older patients with multiple chronic conditions and reduced life expectancy, when the likelihood of benefit and goals of care must also be considered in addition to satisfying the basic principles of optimal medication use in the elderly [3].

References

L22
Old men hyperthyroidism
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BMC Geriatrics 2010, 10(Suppl 1):22

Even the thyroid, like all the other organs and tissues, has undergone anatomic-functional modifications during the senescence. One of the characteristics of ageing is the significant increase of thyroid disease and their different clinical expression. Moreover, thyroid disease in older patients requires special attention because of the increased gravity caused by the frequent co-existence of other pathologies or the greater risk of pharmacological interferences and a lower metabolism of the drugs. In particular, hyperthyroidism in old men is a pathology that should not be undervalued because of the peculiarity of the clinical and prognostic aspects which characterize this age.

The prevalence of hyperthyroidism increases 7 times in people over sixty-five years old and, including the subclinical hyperthyroidism; the percentage of people over sixty-five years old oscillates from 0.7% to 4% according to the causality. The most frequent causes of hyperthyroidism in old men are the toxic multinodular goiter and the autonomously functioning solitary nodules, which in the iodineless areas represent over the 70% of the causes; moreover hyperthyroidism exogenous (iodine and iodathe composto, like amiodarone, means of radiological contrast, ingestion of intentional or unintended suppressive doses of thyroid hormone). The clinical manifestations of hyperthyroidism are peculiar and they are often different in old men with respect to young men.

In old men the apatetica production is frequent with not many aspecific symptoms and cardiovascular complications (atrial fibrillation or other arrhythmias).

Also the therapy is different in old men with respect to young men. In fact it must be individualized not only because of the causes, but also the age, by the risk factors of cardiovascular illnesses and by the presence of others illnesses, too.

L23
Hypogonadism and aging
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BMC Geriatrics 2010, 10(Suppl 1):23

The Massachusetts Male Aging Study [1] shows that male hormones decrease with aging. This is due to some testicular and hypothalamic-pituitary defects. Impaired hypothalamic secretory reserve, resulting in a reduced and chaotic secretion of GnRH, reduced pituitary response to GnRH, resulting in an increased but irregular LH pulse frequency [2].

With aging, there is a 1.3% increase of sex hormone binding globulin (SHBG) levels per year [3]. SHBG binds strongly to testosterone, resulting in a reduction of bioavailable testosterone. The age-related reduction of testosterone seems genetically determined [3]. The Testosterone reduction plays many effects on body composition [4]. Testosterone also operates its effects on the penis leading to a reduction of smooth muscle cells/connettive tissue rate, neuronal nitric oxide synthases, arterial influx/venoocclusion rate. Recently, three scientific societies published some recommendations for the investigation, treatment and monitoring of this kind of hypogonadism, that has been renamed Late Onset Hypogonadism [5]. These recommendations have been updated lately [6] and shared by two more scientific societies.

References

L24
Pharmacological therapy of osteoporosis
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BMC Geriatrics 2010, 10(Suppl 1):24

Osteoporosis is a disease associated with an increased risk of fractures. Vertebral and hip fractures are associated with high mortality or loss of autonomy. The aim of this review is to explore the scientific evidence for current therapies for postmenopausal osteoporosis and fractures and to establish how to treat osteoporosis in clinical practice without risk for patients. We performed research by the use of pubmed of all randomized controlled trials on osteoporosis therapy. The key works used were “osteoporosis therapy”; “postmenopausal osteoporosis” and “osteoporosis trial”.
Efficacious pharmacological therapy include alendronate, risedronate, hormone replacement therapy, strontium ranelate, that are successful agents for femoral and vertebral sites. All osteoporosis patients may take calcium and vitamin D supplementation often not recommended by the physicians. Treatment of Osteopenic patients need further evidence. Early diagnosis and treatment can help to reduce the complications such as fractures but adverse effects may be monitored and need particular knowledge in this setting [1-4].

References


L25

Pet therapy and geriatrics: a social-sanitary connection
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BMC Geriatrics 2010, 10(Suppl 1):25

Background: The Pet therapy has effective intervention strategies to treat psycho-physics pathologies as well to improve life quality. Animals represent ethereal molecules capable of stimulating the release of neurotransmitters and various endogenous peptides with several mechanisms of action, mainly of emotional type, that promote an interconnection between affective and biological spheres, modifying the neuro-endocrine axis, and determining, through the biochemical-nervous pathways, the attainment of a state of well-being: eucenestesis. The aim of Pet Therapy is to ameliorate the state of well-being of some classes of patients and, among those, elderly people that, by means of contact with pets, experience a state of well-being connected to:

- biological mechanisms: activation of specific neurotransmitters produce a rise in the level of endorphins, a decrease in the levels of adrenalin and corticosteroids, and a decrease in the activity of cholinergic system;
- affective-emotional mechanisms (i.e. soul expressions); in men and superior animals neurons that fire both when the subject completes an action and when observes others that do the same action (mirror neurons) have been identified;
- physical mechanisms: responsible for the psychological boundary establishment of one’s own identity, one’s own self, and one’s own existence;
- psychological mechanisms: by means of pets, man develops interpersonal relationships;
- associated mechanisms: single mechanisms interact with each other in a synergistic way and, thanks to factors that reduce the feelings of alienation and isolation such as the communication with other people, the recall of memories, the entertainment, and the play, determine a cerebral stimulation.

The contact with pets is also effectual on behavioral parameters reducing excitement, stimulating creativity, curiosity, and observational ability; and on affectivity ameliorating depression and anxiety. Besides age-associated pathologies (i.e. hypertension, diabetes, cardio- and broncho- pathies), elderly people show discomforts (i.e. retirement, and consequent loss of the social position, mourning and/or stressful events, home change, hospitalization in old’s people home, loss of social and emotional entourage) that cause an increase of anxiety, depression, and physiologic cognitive impairment.

Conclusions: The use of pets in geriatrics represents a proper true drug both in the prevention and in the therapy of pathological conditions that require long hospitalization periods such as mental impairment due to old age and Alzheimer’s.

Increased life expectancy in industrialized countries has led to the progressive aging of the general population, this event is associated with a concomitant increase of Cardiovascular Disease (CVD) that represents not only the main cause of death but also one of the major causes of morbidity, inability and reduction of life quality in the elderly population.

In the Western countries, Arterial Hypertension (AH) affects more than 50% of the elderly, and Heart Failure (HF) represents the most frequent diagnosis among hospital discharges among the elderly. The prevalence of type 2 diabetes mellitus (DM) also increases in the elderly population, reaching about the 7-10%. In this context, the role of laboratory diagnostics is fundamental to support the diagnosis, for monitoring drug therapy and its possible side effects. In patients with recent diagnosis of AH, it is crucial to perform a complete hemocromatometric analysis, the evaluation of lipid and glucidic metabolism parameters, serum electrolytes, and creatinine and uric acid to evaluate renal function. Hemoglobin and hematocrit values can establish the presence of anemia, which can be a sign of renal disease. Fasting glucose can be used to define the diagnosis of DM, and in patients with previous a diagnosis it is useful to control the metabolic status that is correlated to the development of cardiovascular complications. Moreover in hypertensive patients, the presence of high blood glucose levels can mask a secondary form of AH, as do the potassium serum levels. In addition, in the elderly an impairment of the thyroid function should also be evaluated, as a possible cause of atrial fibrillation, that is the most frequent tachyarrhythmia in over 65 year olds.

In the elderly, the diagnosis of HF in the elderly with different comorbidities can represent a very strong challenge; in this case, laboratory diagnostics can support the clinician in the diagnostic and therapeutic process. It is advisable to measure BNP/NT-proBNP to exclude/confirm the diagnosis of HF in patients with ambiguous clinical signs and symptoms that can be confused with other clinical conditions. Moreover, it is important to dose some laboratory parameters related to renal function to monitor possible side effects of drugs employed in chronic HF (CHF). Thus, in the management of the elderly affected by CVD, the laboratory is crucial and the kind and the frequency of laboratory tests are above all oriented by the patient’s clinical symptoms and signs, by the presence of target organ damage and the possible side effects of the employed drugs.

SPECIALIZED MEDICINE

L27

Screening of AAA
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BMC Geriatrics 2010, 10(Suppl 1):27

When the possibility to submit the population to a screening program is considered, a series of parameters must be evaluated. Mainly four: 1) prevalence of the pathology 2) the accuracy and the invasivity of the test used for the screening 3) the effectiveness of the necessary interventions to correct the pathology and the relative cost 4) the general economic commitment. Screening for abdominal aorta aneurysm corresponds to these criteria. The prevalence is elevated if the screening is turned to a selected population: for instance the incidence of
the aneurysms of the abdominal aorta with greater dimensions than 3 cm in males over sixty varies from 4% to 8%; if the subjects have vascular risk factors such as smoking and hypertension, the incidence increases from 2 to 5 times; the prevalence in the women over 60 years old is just up to the 1.5%, but if considered in the subjects with familiar history or with multiple factors of vascular risk, it increases two or three times more. Ultrasound are extremely accurate for the identification of the aneurysms of the abdominal aorta. The effectiveness of the treatment of the aneurysms of great dimensions is widely documented: the annual incidence of breakup and death because of aneurysms of the abdominal aorta larger than 5.5 cm is equal to around 16%, while the pre and post surgery mortality from aneurysms of these dimensions changes from 2% to 6%. Subjects with great aneurysms receive a definite benefit from the surgery. The identification of the “small aneurysms” moreover enables a suitable program of overseeing to continue until the possible correction. The general economic commitment is sustainable just because it is carried out with non-invasive investigations, without correlated consequences, repeatable and low cost, in contrast to the huge managerial costs of the treatment of the morbidity and the mortality correlated to the pathology. In conclusion enough data exist to hold effective screening for the search of aneurysms of the abdominal aorta in selected populations of subjects between the ages of 60 and 75 years old and that the cost for the society can be considered sustainable.

Reference


A clinical review of depression in elderly people

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Background: Almost 20% of people over 65 show depressive symptoms while approximately 36% of demented over 75-year-olds are suffering from moderate-mild depression and about 40% of people over 85 are affected by a depressive condition [1] Having a negative self-perception and fearing social stigma because of that, stops older people asking for any psychiatric help. Moreover, their somatic complaints are attracting much more interest due to several illnesses being in comorbidity with depression. So, almost half of geriatric complaints are attracting much more interest due to several illnesses being in comorbidity with depression. Hence, it is necessary to conduct research on the depression in elderly people.

Clinical evidence: Elderly people may suffer from all types of depressive disorders: however, their clinical pictures are different from adults, [2] showing predominant anxiety, insomnia, cognitive impairment, anhedonia, and agitation and less evident symptoms in the affective-mood domain.

Multifactorial risk for depression involves the bio-psycho-social context: family history of depression, use of several drugs (BDZ, NSAIF) or abuse of common substances (alcohol), somatic diseases with disability and/or chronic pain, permanent damage to body image, daily loneliness and social isolation, recent grief, reduce perception of self-wellness, fear of death, as well as availability of social support and economic resources, capacity of living in the community or need for assisted residency.

Depressive Disorders in aged population, according to their predominant clinical features, may pertain to the following groups:

- Biological: early onset, Bipolar spectrum, Melanocia, Psychotic or Atypical Depression
- Psycho-reactive: late onset, relevant loss events or persistent stressful conditions such as isolation or disability or a severe medical condition
- Mixed, organic + psychological: post-stroke depression, CNS altering neurotransmission drugs or metabolic adverse effects of poly-medication; initial Dementia or Parkinson Disease;
- Depressive pseudodemencia, temporary and reversible symptoms within the same neuropsychological domains of AD [3-5]

Conclusions: Relapse of an earlier depression is possible in later life but usually depression occurring for the first time may depend on another medical illness. Somatic complaints without any apparent medical etiology can be found. Clinical diagnosis of depression versus dementia can be really difficult, although some key features may help to detect depressive disorders [6] Cognitive assessment, corroborated by neuroimaging investigation, is required, in order to establish appropriate treatment.

References


L29

Genetics of Parkinsonism

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Parkinson’s Disease (PD), the second most frequent neurodegenerative disorder after Alzheimer’s disease (six million patients world-wide), is generally diagnosed after the sixth decade. It causes motor dysfunctions, such as bradykinesia, resting tremor, rigidity and postural instability, but also affects autonomic functions and cognition. PD results mainly from progressive degeneration of dopaminergic neurons in the substantia nigra and other monoaminergic cell groups in the brainstem, increased microglial activation and accumulation of proteins in surviving dopaminergic neurons, known as Lewy bodies and Lewy neurites. The etiology of PD is unknown, although older age and neurotoxins are established risk factors, and smoking appears to be protective. In the last decade, several causative genes and susceptibility factors have been identified in rare families with Mendelian inheritance, and suggest that abnormal handling of misfolded proteins by the ubiquitin-proteasome and autophagy-lysosomal systems, increased oxidative stress, mitochondrial and lysosomal dysfunctions, and other pathogenic dysfunctions, contribute to PD. Although PD was long considered a non-genetic disorder of sporadic origin, 5-10% of patients are now known to have monogenic forms of the disease. At least, 13 loci and 9 genes are associated with both autosomal dominant (PARK1 and PARK4/alpha-synuclein (SNCA); PARK5/UCHL1; PARK8/LRRK2; PARK11/GIGYF2; PARK13/Omi/Htra 2) and autosomal recessive (PARK2/Parkin; PARK6/PINK1; PARK7/DJ-1/PARK9/ATP13A2) PD. Monogenic forms represent less than 10% of PD in most populations. The vast majority result from complex interactions among genes and between genes and environmental factors. Genetic variations may be susceptibility factors or disease modifiers, affecting penetrance, age at onset, severity and progression. High-density arrays of single nucleotide polymorphisms (SNPs) permit the identification of susceptibility factors in genome-wide association (GWA) studies, in which the frequencies of putative risk alleles are compared in patients and controls. The identification and characterization of Mendelian forms of PD and association studies in sporadic PD patients delineating molecular pathways that are involved in dopaminergic cell dysfunction and death.
References

L30
Pharmacological treatment of Parkinson's disease
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For the past 30 years levodopa (LD) has been the pharmacological standard of care for treating idiopathic Parkinson's disease (PD), a neurodegenerative disease of the central nervous system. LD is a pharmacologically inactive precursor, which is converted enzymatically to the neurotransmitter dopamine by a declining population of neurons in the substantia nigra, the most important site of the pathology of PD. Most patients experience a smooth, lasting response to small amounts of LD during the early years of treatment, but as the underlying disease gets worse, treatment-related problems arise. Motor fluctuations, which slowly emerge after 3–5 years of chronic LD therapy, gradually replace the smooth pattern of response, and more frequent dosing is required. Abnormal involuntary movements (dyskinesia), wearing-off of the motor response after a few hours, organic psychosis (confusion and hallucinations), and progressive loss of independence characterize the complication of the pharmacological treatment of PD. Despite its problems and the recent development of other anti-parkinson drugs, LD remains the most effective pharmacologic agent available for the relief of symptoms in patients with PD. The use of dopamine agonists has been greatly encouraged in recent years. The main indication for their use is the initial therapy of patients with PD, particularly in younger patients. Several studies have reported that their early use may delay the onset of motor fluctuations and dyskinesia. The principal dopamine agonists are ergoline (bromocriptine, lisuride, pergolide, cabergoline) and non-ergoline (ropinirol and pramipexole).

Apomorphine is a drug with a pharmacological profile comparable to that of dopamine. When administered subcutaneously in subjects with PD, apomorphine is able to quickly reverse the periods of motor off. It is therefore used in cases with severe motor fluctuations, either by continuous infusion via a portable micropump with or by single bolus injections. MAO and COMT are enzymes that metabolize dopamine in the central nervous system. Inhibitors of MAO and COMT are used to prolong the half-life of LD. Such drugs are represented by selegiline (MAO inhibitor) and tolcapone and entacapone (COMT inhibitors). The Italian guidelines suggest different treatment strategies according to the age of the patients with PD: for patients with early onset (≤ 50 years) monotherapy is recommended with dopamine agonists that may be associated with a low dose of LD; for patients aged 50 to 70 years monotherapy is recommended with dopamine agonists or with LD or association between the two treatments.

L31
Actinic keratoses and basal and squamous cell carcinomas in elderly people: clinical aspects
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Background: Neoplastic skin alterations are frequently seen in elderly Caucasian people, above all if they have worked for long periods under high UV exposure. Our region, Calabria, a peninsula in the south of Italy with a long coastline, is quite homogeneous for population and lifestyle. Its inhabitants are Caucasian, most dark skinned but some fair skinned. Elderly people generally refer to a history of working as fishermen or farmers and consequently they have been exposed to the sun rays for long periods.

These facts explain the high incidence of basal cell carcinoma (BCC), squamous cell carcinoma (SCC) and actinic keratosis (AK) in our region, namely in elderly people.

Materials and methods: BCC and SCC are the most frequent malignant tumors that can be seen on the skin and consequently in the whole body. A fundamental step is the clinical suspicion. Regarding this issue, BCC as well as SCC and AK can present several different clinical aspects. BCC may be nodular, pigmented, cystic, superficial, morpheaform, or may appear as a “rodent ulcer”, also known as a “Jacobi ulcer”. All of these subtypes present different biological behaviour: for instance, while superficial BCC is quite benign in its evolution, morpheaform BCC or SCC is cured by surgical excision, but it may be misdiagnosed with a nodular melanoma, that is a very aggressive disease.

SCC is generally distinguished in invasive SCC or SCC in situ. SCC in situ include Bowen's disease, erythroplasia of Queyrat in the penis and according to several authors also AK. Invasive SCC presents a keratotic firm papule or plaque arising on sun-exposed skin. The color varies form pink to flesh colored to grey. Very characteristic are the surface change that include scaling, ulceration, crusting or the presence of a cutaneous horn.

AK is frequently the precursor of SCC. Therefore it has been considered by some authors as a precancer or a preneoplastic lesion, whereas other authors regard it as a true carcinoma in situ.

AK begins as a small macule, ill-defined, with dry, adherent scales, rough on the surface so that it can be felt more easily than seen. The color varies from skin-colored to pink to red to brown. Lesions are frequently multiple and their size varies from few millimeters to 1–2 centimeters.

Several clinical variants of AK are recognized: hypertrophic, lichenoid, proliferative, pigmented AK. Actinic cheilitis is considered a form sited on the lips.

Conclusions: Generally BCC and SCC are cured by thorough local excision. Unfortunately sometimes they can develop aggressive behaviour invading the surrounding and the underlying tissues. Therefore it is very important to diagnose them early before such invasiveness can appear.

L32
Aging and photoaging
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Skin aging is not a unique phenomenon but it is commonly divided into two different processes: chronological aging and photo-aging. Therefore we recognize two different phenomena of skin aging. Chronological aging represents the structural, functional and metabolic changes in the skin that parallel the aging and degenerative changes in other body organs. Photo-aging is a consequence of oxidative damage due to overexposure to ultraviolet (UV) sunlight - both UVA and UVB (responsible for sunburn, basal and squamous cell carcinoma); Conditions of variable UV exposure may result from different latitudes, alteration of atmosphere, job (farmer towards bank employer), different behaviour to sun bathing [1]. A lot of different theories have been proposed to explain the phenomenon of aging. Many of them are interlinked. The deceleration of the mortality rate is one of the most intriguing recent findings in longevity research.

Reference

L33
Physical activity in older individuals: scientific evidence
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Scientific evidence indicates that regular physical activity slows the rate of decline of most physiological age-related parameters associated with
health, fitness and quality of life [1]. Senior athletes provide an ideal model for successful aging. Although most of the information derives from individual closed-skill sports, little information is available regarding the motivation to sport participation and dietary and training regimens of senior athletes who might be at risk of incorrect training schedules or nutritional patterns. More recent studies focused on open-skill sports, which require aerobic and anaerobic energy productions, various exercises, cognitive functions, technical capabilities, and inter-individual interactions to cope with the playing environment. Findings suggest that older athletes maintain good anaerobic and aerobic capacities [2,3], coordination capabilities [4], and attentional skills that outweigh age-related deficits [5]. Furthermore, older athletes competing at a local level are less supported by self-determination as compared to age-matched athletes competing at national or international levels [6]. Moreover, senior competitions elicit high physiological responses, which represent a potential danger when no medical approval is obtained before starting the program [1,2]. Furthermore, older athletes undergoing improper diet regimens show amplified subjective perception of training intensity, attributable to their feelings rather than training parameters per se [5].

References

L34 Tolerability of antiretroviral therapy (HAART) in elderly age
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Background: The median age of people living with HIV/AIDS is increasing: while efficacy of HAART has reduced mortality and prolonged the life of patients, low perception of risk and new late diagnosis are related to infection in an elderly age. Most new late diagnosis are performed in older hardly immuno-compromised subjects: the development of opportunistic diseases complicates management of therapeutic strategies (drugs interactions, cumulative toxicities, hypersensitivity reaction), mainly in presence of comorbidities. Most randomized clinical trials with new drugs tend to avoid the enrolment of >50 years patients with proper comorbidities of old age. So the few data we can analyze come from observational cohorts. While it is well defined that older people are more adherent to treatment and achieved an adequate control of HIV-RNA viremia more frequently than younger although an incomplete immuno-reconstitution, the development of drug toxicity with higher frequency is controversial. Elderly people are more frequent to show reduced hepatic and kidney function, frequently have comorbidities requiring new therapies with a higher pill burden and higher risk of drug interactions. Most antiretroviral drugs are metabolized by cytochrome system. Treatment may accelerate mitochondrial dysfunction, nucleoside reverse transcriptase inhibitors may contribute to muscle wasting. Some typical side effects of HAART such as body change and facial lipoatrophy could be more evident when associated with natural facial changes occurring with aging and modify negatively self perceived body image and relationship capacity. Age was also shown to increase the risk of renal tubular disease in association with tenofovir.

Age is one of the major cardio-vascular disease (CVD) risk factors and the inflammatory component may contribute to this increased risk despite HAART efficacy. The risk of myocardial infarctions is increased in older treated HIV+ patients: metabolic abnormalities are more frequent at baseline and the treatment could increase the cumulative risk of CVD.

Conclusions: Tolerability of HAART seems do not differ in older vs younger patients although new cardiovascular, endocrine, metabolic or neurological events are more probable in the first group. An increasing number of people older than 50 years old will attend our clinics in the near future. It will be necessary to monitor short and long term toxicity and consider the different pharmacokinetics of drugs in an older body to perform adequate therapeutic strategies and to reduce risk of drugs interactions.

The care of patients with HIV will probably become more complex and more specialists will called on to help manage this complex disease.

References

L35 Confusional status epilepticus in elderly
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Non-convulsive confusional status epilepticus (NCSE) is clinically characterized by prolonged impairment of consciousness of variable entity, often associated with myoclonias or automatisms. EEG shows continuous paroxysmal activity or electrographic discharges. When NCSE occurs in older patients, differential diagnosis with other conditions such as stroke or toxic/metabolic encephalopathy, may be difficult and a high degree of suspicion is required. Emergency EEG represents the most important means of investigation in such cases. According to ictal EEG, NCSE may be classified as generalized (including typical and “de novo” absence status) or complex partial status epilepticus (CPSE). Absence status, or ‘petit mal’ status, is the most frequently encountered form of NCSE. It can occur in the context of different types of generalized idiopathic epilepsies, or ‘de novo’, with onset usually in the elderly, precipitated by toxic or metabolic factors in subjects with no previous history of epilepsy [1]. Ictal EEG shows continuous or almost continuous generalized spike and polyspike and wave discharges. Clinical and EEG normalization occurs after i.v. benzodiazepines (BDZ) in most cases. The prognosis of “de novo” absence status is generally good and recurrences are rare [1]. In CPSE, impairment of consciousness may be continuous or fluctuating, but it is usually clinically very difficult to distinguish from absence status. CPSE may occur in patients with preexisting epilepsy, at times precipitated by AEDs withdrawal, or in subjects with acute or remote cerebral lesions. Ictal EEG shows continuous or rapidly recurring complex partial seizures which may involve temporal and/or extratemporal regions. CPSE tends to recur and may be difficult to treat (response to i.v. BDZ in ~ 60% of patients) [2]. Cognitive and behavioral sequelae have been rarely reported, thus prompting an early recognition and treatment of such a condition. Mortality is also rare, mostly depending on etiology, but may reach up to 26,3% in the elderly. CPSE of frontal lobe origin is a diagnostic challenge: it is rare, the symptoms are unusual, and the patients should be documented extensively [3].

References
The protective role of physical activity in different pathologies

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The protective role of physical activity in different pathologies has been shown in numerous scientific studies on the general public and especially among older adults [1]. Physical activity has been shown to be effective in reducing the onset of several chronic pathologies, such as cardiovascular diseases, hypertension [2], diabetes, osteoporosis, obesity [3], and neoplastic diseases, also it helps to diminish depression and anxiety by maintaining a balanced mood.

Exercise activates the metabolic system in order to supply energy, in a trained organism it increases the use of glucose from part of the muscle which increases or diminishes the onset of hyperglycemia, typical of diabetes [4].

Lipid metabolism is favorably influenced by the decrease of the lipoprotein at low density LDL by increasing the HDL [5].

An exercise that burns out 4-7 Kcal/minute reduces cardiovascular mortality rate in men and women, no matter the age group. Increasing the intensity of muscle activity, the risk of mortality rate in cardiovascular diseases tends to progressively diminish [6].

Regular physical activity has also significantly been shown to decrease the risk of colon and breast cancer [7].

The mechanical stimulus produced by physical activity promotes bone remodelling. In particular, physical activity transfers stimulus to the bone in two ways: directly to the body’s weight on the skeleton, and indirectly through muscle activity [8].

References

L37
Tumours of the prostate

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BMC Genomics 2010, 10(Suppl 1):L37

Background: In the United States, Prostate cancer is the most common tumour in men, with an expected 192,280 new cases and 27,360 deaths estimated in 2009 [1]. About 81% of patients with prostate cancer are over 65 years of age. Prostate cancer is a biologically heterogeneous neoplasm in which, especially in the elderly, some forms remain silent and with risk of disease-treatment. Moreover, this population may not receive optimal therapies for their disease, if decisions are based only on their chronological age. Health status, more than age, is a major factor affecting individual life expectancy. Comorbidity is the key predictor of health status, and should weigh more on the treatment decision than age alone. Other important parameters to consider in the elderly are the degree of dependence in activities of daily living, the nutritional status and the presence or not of a geriatric syndrome. The androgen-deprivation therapy (ADT) has become an integral piece of the armamentarium for treating prostate cancer in neoadjuvant, adjuvant and palliative therapy [2]. The impact on health-related quality of life (HRQOL) following ADT induction has gained significant clinical attention. Several series documented an association between ADT and declining HRQOL [3]. Treatment of hormone refractory metastatic prostate cancer with Docetaxel 75 mg/m² every 3 weeks (3W) in combination with daily prednisone has been shown to prolong survival and to have the same efficacy in healthy elderly as in younger patients [4].

Conclusions: Geriatric assessment in elderly patients with prostate cancer is crucial. Each treatment has to be adapted to health status.

References

L38
Clinical and epidemiological aspects of epilepsy in the elderly

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The concept that epilepsy is a disease of childhood and adolescence is rooted in pretty common knowledge. Actually it’s not quite right as several epidemiological studies conducted in developed countries have shown that both the incidence and prevalence of epilepsy is higher among the elderly compared to other segments of the population and is growing in connection with the increase of age from 55 onwards. The incidence of epilepsy in the general population is estimated by the epidemiological study Rochester [1] in 44 cases/100,000 inhabitants per year. The same study estimated the age-specific incidence is high (82 cases) in the first year of life, decreases during childhood, remains stable and relatively low in adulthood and grows considerably from 55: subjects aged > 75 years showed the peak incidence (139 cases). As regards prevalence data in Rochester study [2], it is interesting to note that the cumulative rate of epilepsy in the age groups 55-64 and 65-74-year-old is around 1.5%, which is the double of the previous age-ranges. In the course of the “Rotterdam study”, the prevalence of active epilepsy was found to be 0.7% in the age-range 55-64 and 1.2% in the age-range 85-94 [3] As concerns the clinical and semiologic aspects, seizures of the elderly are more difficult to interpret correctly for a variety of reasons, as opposed to those of the child, or young adult seizures that begin later in life is the cerebro-vascular one, followed by cancer and head trauma, metabolic disorders and degenerative diseases (like Alzheimer’s disease).

References
L39
Genetics of longevity
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BMC Geriatrics 2010, 10(Suppl 1):39

Epidemiological and family-based studies in different populations underlined the existence of a genetic component in human longevity. Studies on families of centenarians demonstrated that parents, siblings and offspring of long-lived subjects have a significant survival advantage. In particular, the survival curve of siblings of centenarians is significantly higher than that people belonging to the same birth cohort. Moreover, siblings of centenarians have a lower risk of suffering from major age-related diseases, such as cardiovascular diseases, diabetes and cancer, when compared to appropriate selected controls from the same population. Indeed, studies on the concordance of the age of death in twins demonstrated a higher correlation in monozygotic than dizygotic twins and suggested that approximately 25% of the variation of the adult lifespan is caused by genetic differences between individuals. It was also demonstrated that the genetic component affecting longevity increases at advanced ages and it is generally stronger in males than in females. Furthermore, a positive correlation between population homoygosity and longevity was suggested, confirming the relevance of genetic differences between individuals for the susceptibility to a long lifespan. Identifying genes that affect human longevity can provide information about the molecular mechanisms involved in the aging process and shed light on the heterogeneity of the aging phenotype. Studies on experimental models suggest that caloric restriction improves age-related health and slow the aging process by limiting energy intake. Furthermore, in animal models specific alterations in single genes (age-1,daf2, sir2, methuselah, p66) can dramatically extend or decrease lifespan. In humans, evidence is accumulating for an additive multilocus model, i.e. multiple genes with modest effect, working independently and as a network [1]. Because of the suggested additive effects of different genetic variants predisposing to longevity, the combined approach of linkage analysis in affected sib pairs (ASP) in candidate regions for high frequent variants and Genome Wide Association for less frequent polymorphisms [1] is considered promising for the identification of the genetic component of human longevity. Among the genes for which association has been demonstrated with human longevity, there are Apolipoprotein genes (APOE, APOB, ACE, APOC3), siruin genes (SIRT1 and SIRT3), genes belonging to the anti-oxidant (SOD1, SOD2, PON1, FOXO3A) and inflammatory pathways (Klotho, CETP, IL6). A relevant role seems to be represented also by the inherited and somatic variability of the mitochondrial genome.

Reference

L40
Sporadic Parkinsonism
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Background: Differential diagnosis of parkinsonism syndrome is a major challenge in movement disorders because at the onset there is an overlapping of signs and symptoms. From a neuropathological point of view, parkinsonism may be related to a degeneration of the nigrostriatal pathway or the neurodegenerative process may be more widespread [1,2]. In the early course of the disease presenting with parkinsonism symptoms, differentiation between these disorders may be difficult, [3,4], but the clinical diagnostic criteria become more applicable during later stages. Motor symptoms (bradykinesia, tremor at rest, rigidity) may be associated to cognitive disfunction. Sporadic parkinsonism may be distinguished in: Multiple system atrophy (MSA), Progressive supranuclear palsy (PSP), Corticobasal degeneration, and Lewy body dementia [3,5,6].

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L41
Guidelines for exercise prescription in elderly. Satus and limitations in the south of Italy
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BMC Geriatrics 2010, 10(Suppl 1):41

The elderly are generally less physically active than young adults [1]. In 2007 the American College of Sport Medicine (ACSM) and the American Heart Association (AHA) published an updated recommendation on physical activity specific for older adults that emphasized the role of a regular physical activity [2]. Recently, the U.S. Department of Health and Human Services published national physical activity guidelines that provides guidance about physical activity for adults aged 65 years and older [3]. In particular these guidelines stress that if older adults cannot perform 150 min of moderate-intensity aerobic activity per week because of chronic conditions, they may be physically active based on their abilities and conditions. Despite these recommendations, in Italy data on physical activity and sport practice in the elderly are rather critical. After 65 years old only 9% of people practice sports and after 75 years old or over this value drops to 2.8%, while physical activity is 21.6% and 36.3% respectively. From 65 years old or over more than 50% people are sedentary and 75% of 75 year-olds claim no sport or physical activity practice in their leisure time [4]. In the South of Italy, particularly, 40% of elderly men and 64% of elderly women don’t perform any physical activity in their leisure time. Nevertheless we must consider that a significant part of elderly people living alone have few opportunities to socialize, so their participation in structured exercise programs may be very useful. In Italy the elderly who live alone are 5.6 million and most need help and assistance at home. Actually other countries apply health programs such as Enhance Fitness; a low-cost, evidence-based group exercise program developed specifically for older adults [5]. Based on these considerations we think it’s necessary to realize specific physical activities for elderly people, following the latest scientific recommendations and characteristics: simplicity, safety, economy and efficacy.

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Natural history of HIV infection in older patients
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Background: The decreased mortality rate obtained with antiretrovirals (ARVs) induced a shift of HIV infection toward a chronic condition and increased the fraction of patients aged >50 years. Senior patients can be included in three subgroups with different clinical problems.

Long term exposure to ARVs give rise to the main clinical problems. Several studies recognize age as an independent risk factor for acute and chronic toxicities probably because of an additive mechanism with age related health problems (metabolic syndrome, cardiovascular diseases, endocrine-metabolic, liver, renal, bone and central or peripheral nervous system impairment. Among 1220 HIV we observed a higher rate of switching/discontinuation due to toxic effects in the elderly (Figure 1).

Interaction between ARVs and several drugs widely used in the elderly (H2-Antagonists, Pump-Proton-Inhibitors, Benzodiazepines, Calcium-Channel-Blockers, Hormonal-Contraceptives, HMG-CoA-Reductase-Inhibitors, Phosphodiesterase-Type-5-Inhibitors, and Oral-Anticoagulants) are reported to and can influence both treatment strategy and effectiveness in older patients.

Late primary infection: Acute infections are hardly recognized but, since most HIV infections acquired in advanced ages are sexually transmitted, association with other STI is expected in this subset of patients who are not aware of own their risk, mode of HIV transmission and seem poorly reached by health education programs on safe sexual behaviour. Post-menopausal women are at a higher risk of infection due to hormonal mucosal changes and decreased use of condoms.

Diagnostic delay: Older persons are not perceived to be at risk from HIV by their physicians so that diagnosis is delayed. Moreover some AIDS related diseases (acute or chronic lung diseases, anaemia, cancers, peripheral/central neurologic disorders, herpes zoster, tuberculosis) could be attributed to advanced age. A large proportion of senior patients arrive at medical attention as AIDS presenters or late presenters, a factor which is associated with poorer prognosis and higher risk of disease transmission. AIDS defining diseases are very close to those found in the younger population, Pneumocystis (Pneumocystis jiroveci pneumonia being one of the most common occurring disease in AIDS presenters. The increased hospitalization rate among senior patients between 1996 and 2000 were mainly due to cerebrovascular and ischemic heart diseases. Among causes of death a higher proportion of non-AIDS related factors sepsis, non-AIDS malignancies and heart or vascular diseases have been described.

Clinicians should now be aware of the new challenges in management of HIV infected patients related to long term treatments, increased median age of the patients and appearance of age-related diseases.

Reference
After personal experiences have been reported, we will speak of the advantages and disadvantages of the method and for which patients this cure is recommended.

L45

The role of the oncologist

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Several oncological and hematological malignancies may present with bone disease. Clinical manifestations of bone disease are mainly osteolytic and/or osteoblastic skeletal lesions. Preclinical models both in vivo and in vitro have been developed to study tumor cell biology within bone microenvironment and have allowed investigators to better understand pathogenesis of neoplastic bone disease. These represented the basis to design targeted drugs that were able to restore normal bone microenvironment and turnover. Among these drugs, bisphosphonates (BPs) are the current mainstay of bone disease treatment. Indeed, BPs have been shown to be very efficient drugs, and are able to revert neoplastic bone turnover. However, BPs may have important toxicity and among the main side effects, we recognize osteonecrosis of the jaw. Because of these sequelae, international oncology societies and networks have suggested clinical guidelines to allow clinical oncologists to use these drugs in order to obtain the best results with least toxicities. Furthermore, prevention and treatment strategies of BP side effects can be best achieved through close interaction with other related clinical practitioners such as the dentist and maxillofacial surgeon.

L46

Prevention of skin damage to solar radiation in elderly patients: sunscreens

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Exposure to UV radiation can cause skin damage; among UV rays UVB are commonly considered to be more important in inducing photoaging and skin cancer; however in recent years some authors have claimed an important role also for UVA that can concur with UVB to damage the skin. UVB rays have a wavelength between 280 and 320 nm and are responsible for immediate skin damage represented by erythema. On the contrary, the skin damage produced by UVA, with a longer wavelength than UVB comprised between 320 and 400 nm, is generally not clinically evident but will accumulate over the years, showing its effects later.

In the past the attention of the formulation of sunscreens was placed on UVB protection, but nowadays, as we have mentioned before, UVA protection is no longer necessary. Moreover, UVA radiation is not shielded either by plastic or glass, so the skin can be exposed even in apparently protected closed spaces, such as the home or car. Therefore there are now filters or sunscreens available with complex formulas that effectively protect both from UVB and UVA. The physical filters, also called sunblocks, made of metals such as zinc oxide or titanium dioxide, offer excellent protection, but they do take on a bleached unpleasant side effect. Some researchers have developed formulas with micronized particles to reduce this effect but the results are not always very satisfactory. On the other hand, the chemical filters are substances capable of using the energy of UV radiation to change their molecular structure. A possible solution has been found mixing physical and chemical sunscreens to obtain a higher sun protection factor (SPF) with reduced bleaching effect. However sunscreens must be used to protect the skin from excessive UV radiation, not to permit more UV exposure. Therefore we must not neglect the traditional precautions of wearing hats or protective clothing and avoiding the sun during the middle of the day.

L47

Treatment of epilepsy in the elderly people

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The pharmacokinetics and pharmacodynamics of antiepileptic drugs (AEDs) differ in old age from those in younger patients. Age-related changes in pharmacokinetics play a role as early as the drug absorption stage, because gastric secretion, blood volume, blood flow, and gastrointestinal motility are all lower in old age. The serum concentration of the medications is heavily influenced by protein binding, mainly of serum albumin, whose concentration is markedly reduced in old age, so that the free fraction of medication in the serum is higher. This influences not only the desired medication effects, but also the undesired ones, and is particularly important in the case of highly protein-bound antiepileptic drugs such as valproic acid, phenytoin, or carbamazepine. In elderly patients a reduction of hepatic and renal function were observed. No guidelines, systematic reviews; or meta-analyses on this subject are available. There have been only three randomized, controlled, double-blind therapeutic trials of evidence class I or II regarding epilepsy in the elderly, as well as a number of smaller studies of classes Ia and II. Thus, many clinical decisions about antiepileptic treatment in old age are based on extrapolations of experience and data obtained from younger patients, combined with the general principles of pharmacotherapy in old age. The treatment of epilepsy seems to be successful in the elderly more often than in young adults. A precondition for successful treatment, however, is that the antiepileptic drug is well tolerated and does not interact with other, concurrently taken, medications. The treatment of epilepsy in an elderly patient generally requires searching for the medication that is best tolerated and least metabolized. Problems can arise because drug-drug interactions must be considered in the elderly people that often take multiple medications. It is evident that the so-called enzyme-inducing antiepileptic drugs (carbamazepine, phenytoin, phenobarbital) generally cannot be recommended for use in elderly patients because of their multifarious interaction. Moreover these AEDs may facilitate the development of osteoporosis and cannot be recommended for use in elderly woman patients. Recently, clinical studies have shown a better tolerability of newer antiepileptic drugs. In conclusion numerous factors must be considered in treating elderly patients to tolerate drug therapy is often the basis for AED selection.

L48

Medical treatment of actinic keratoses and superficial skin cancers: diclofenac

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In patients who develop early signs of fotocarcinogenesi, the actinic keratoses are one of the most frequent events that can lead to problems of therapeutic management, especially if for business reasons or lifestyle, they are repeatedly and chronically exposed to the sun. In these patients the lesions are often widespread and recurrent, and may require repeated treatment cycles.

It is in these cases that treatment with topical diclofenac 3% gel hyaluronic acid can provide good results thanks to its efficacy, tolerability, the patient compliance and excellent cosmetic results compared to other conventional therapies. It presents a brief review of clinical cases with the treatment modality and they discuss the indications and efficacy.
HEALTH SERVICES

L49
The epidemiology of age-related hearing loss, social aspects and interaction with chronic disease of older adults
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Hearing loss is one of the most prevalent chronic conditions affecting older adults. In U.S. studies, prevalent estimates of hearing loss in adults aged 65 and older range from 30% to 83% depending upon the definition used. European studies suggest a steady decline in hearing from the sixth to ninth decades. Although age-related hearing loss is not life-threatening, it affects quality of life and can have a negative effect on a person’s health. It diminishes an individual’s ability to communicate effectively, jeopardizes one’s autonomy, and has been correlated with an increased incidence of clinical depression and social isolation.

These findings highlight the need for improved methods of identifying individuals with age-related hearing loss and improving services for providing hearing aids, and auditory rehabilitation. Identifying individuals with hearing loss and supplying appropriate hearing aids and teaching coping strategies may have a positive impact on quality of life for older people.

Reference

L50
Policies towards excellence in science and care giving with reference to Alzheimer-type dementia
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In our country too, the growing number of elderly people together with the contemporary lowering of the birth rate, has now, and will continue to have in the near future, strong influence on choices to be made in healthcare and on welfare policy as a whole. Therefore, the healthcare system must redefine its priorities and face a series of questions regarding the elderly. It will be necessary to rethink care giving functions taking into consideration the epidemiological evolution already underway, scientific progress and its practical applications in medicine together with the expectation for a better quality of life: we should be aiming at giving more life to years rather than more years to life.

So it is in this context that hospitals can no longer be seen as the only, prevalent answer to health and care needs. An entirely innovative network of prevention services, diagnosis, cure and rehabilitation for the non self-sufficient must be provided, innovative also in the way it is supplied and managed, able to respond to the requirements of the patient in an appropriate and punctual fashion.

Hospitalization of a patient suffering from dementia is always to be considered a critical event because of the protracted length of the stay, because of the increasing loss of vital functions in the patient together with the higher risk of complications including infection, falls and iatrogenic damage as well as an increased rate of mortality.

The network of services provided is, therefore, fundamental. Centres specialised in the diagnosis of dementia (Memory clinics, outpatient dementia clinics, Alzheimer assessment units) are able to enlarge upon traditional services by providing the following within the protocols of diagnostic assessment and specific care programs:

~ early identification of the illness
~ more accurate identification of illnesses responsible for dementia
~ improvement of quality of life of both patient and caregiver
~ more accurate treatment

Admission of dementia sufferers to special units has been shown to:
~ reduce the frequency and intensity of behavioural disorders without, or with limited use of psychotropic drugs and physical constriction
~ delay functional loss
~ prevent complications including falls, under nourishment, immobility syndrome and delirium
~ improve the quality of the life of the patient, his family and caregivers

Special dementia units base their specific mission on four central pillars
~ the staff
~ the environment
~ the programs and activities
~ the family

L51
Post-surgical dysphagia: evaluation and rehabilitation
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Surgical resection of a malignant tumor in the head and neck regions quite often alters the complex act of swallowing. The goal of dysphagia rehabilitation is to return the patient’s swallowing to as near normal as possible. Although surgical procedures in the oral cavity, tongue, pharynx can affect preparation, control and transport of the bolus, functional disorders following laryngeal surgery are most common and severe. The larynx serves two critical functions during swallowing. First, it elevates anteriorly moving itself from the path of the bolus and contributing to the opening of the cricopharyngeal sphincter. Second, it protects the airways from inhaling acting as a three level valve – the epiglottis, false vocal folds, and true vocal folds. Any surgical intervention affecting this closure will likely results in aspiration during the swallow. Patients undergoing total laryngectomy have few swallowing problems due to the separation of the airways from the esophagus. On the contrary both partial and reconstructive procedures can significantly affect both the respiratory and the alimentary function. Supraglottic laryngectomy can interfere with laryngeal elevation and sometimes with vocal fold adduction especially when the surgical procedure includes portions of the hyoid bone, base of tongue, aryepiglottic folds, or false vocal folds. Vertical laryngectomies reduce laryngeal closure. When the intervention is limited to one focal fold (cordeectomy), the swallowing recovery is usually easily achieved. In frontolateral laryngectomy the removal of tissues extends to the opposite vocal fold: in such cases swallowing recovery is still possible with a combination of increased effort and compensatory head posturing. In sub-total/reconstructive laryngectomies (Crico-Hyoido-Epiglottolo-Pexy, CHEP and Crico-Hyoido-Pexy, CHP) the surgeon intends to create a neoglottis able to contracts during swallowing. In such cases critical factors in recovery of swallowing are considered the airway closure at the laryngeal entrance, the propulsive movement of the tongue base and its contact with the posterior pharyngeal wall.

Two pnenicus, life-threatening complications can slowly compromise the patient’s life aspiration, pneumonia and malnutrition. Diagnostic procedures of swallowing disorders are mainly represented by radiographic contrast examination and by fiberoptics endoscopic evaluation. Compensatory treatment strategies include postural changes, increasing sensory input, modifying volume, consistency and viscosity of foods. Rehabilitative procedures are designed to improve a range of movements of oral or pharyngo-laryngeal structures and increase their sensory-motor integration and timing. Exercises and manoeuvres designed to achieve such goals are considered in detail.
The etiology of age related hearing loss (ARHL), or presbycusis, is multifactorial and includes both genetic and environmental influences. Much research effort has been put into elucidation of the environmental factors and nowadays a huge amount of data are available regarding the effects of noise exposure, ototoxic medication, exposure to chemicals, chronic medical conditions, malnutrition, tobacco smoking and alcohol abuse, although some of these factors remain still controversial [1]. On the other hand, little is known about the role of genetic factors, despite the fact that the number of genetic studies on presbycusis is increasing at a surprising rate in the last few years. The hypothesis that genetic factors could play a significant role in ARHL was proposed as early as the 1970s, based on the observation of several families whose members were affected by a presbycusis which manifested very early, occasionally before the age of 45, and the consideration that either the time of onset or the rate of progression of presbycusis vary greatly between individuals. In the 1990s, heritability estimates have shown that approximately half of the variance in ARHL is due to heritable factors. An important contribution to the study of genetic factors in ARHL derives from laboratory research on inbred mice. Some of these strains present an early presbycusis and have in common the defective Cdh23<sup>−/−</sup> allele of the gene encoding cadherin23, a protein localized in the stereocilia of the hair cells, which hold the cilia together. Lack or absence of otocadherins increases the vulnerability of hair cells either to aging, or to noise exposure. Experimental data obtained in mice has been found and confirmed in humans. Two genomewide linkage studies and a few association studies based upon candidate genes approaches for ARHL have been published in the last years. ARHL has been correlated with several single nucleotide polymorphisms (SNPs) in a region of KCNN4; with a SNP in N-acetyltransferase 2 (confirming the role of oxidative stress in presbycusis); with a highly significant SNP in the GRHL2 gene; with a significant SNP at the GRM7 locus (indicating the possible effect of glutamate excitotoxicity in ARHL). These findings are important for both the management and possible future therapeutic intervention into presbycusis.

**References**

**Background**

The elderly (≥65 yr) are more sensitive to anesthetic agents and generally require smaller doses for the same clinical effect, and drug action is usually prolonged [1]. Minimum alveolar anesthetic concentration (MAC), decreases approximately 6% for every decade. There is altered activity of neuronal ion channels associated with acetylcholine, nicotinic and GABA receptors [2]. The elderly require less doses for pain relief. Morphine clearance is decreased in the elderly. Sufentanil, alfentanil, and fentanyl are twice as potent in the elderly, due to an increase in brain sensitivity to opioids with age. There are changes in pharmacokinetics and pharmacodynamics of remifentanil, which is more potent in geriatric patients. Clearance and the volume of the central compartment decrease with age and the infusion rates should be titrated [3]. Cisatracurium undergoes Hofmann degradation and is unaffected by age [4]. In the peripheral nerve blocks the duration of analgesia may be prolonged with age depending on the baricity of the bupivacaine solution. When using 0.75% ropivacaine for nerve blocks, age is a major factor in determining the duration of motor and sensory block. When general anesthesia carries great risk for the patient, administering regional anesthesia if possible could provide an excellent solution [5].

**Conclusions:** Age-associated change of the physiological systems results in impaired function and reserve, which affects most of the organs (there is of course variability of such decline between patients). The importance of this, when it comes to anesthesia is that such a patient is less able to respond to perioperative stress and more likely to suffer from an adverse postoperative outcome.

**References**
The value of multimodal or balanced analgesia in a day surgery basis. During the first postoperative hours, up to 40% of patients may experience moderate or severe pain, leading to delayed discharge or unplanned overnight hospitalization [1,2]. The use of a multimodal postoperative treatment plan is recommended. The combined effects of NSAIDs and/or paracetamol, weak opiates (codeine, tramadol) and local anesthetics administered and/or injected by various routes during the perioperative phase should be taken into account. To permit rapid discharge, the possible use of NSAIDs with a prevalent impact on COX-1 and potent opioids at recommended therapeutic doses should take into account potential adverse effects (gastric bleeding and/or bleeding of the surgical wound site). NSAIDs induced renal damage, respiratory depression, delayed canalization, nausea, vomiting, excessive sedation, difficulty in urinating, pruritus induced by potent opioids, postoperative hyperalgesia resulting from elimination of rapid half-life intraoperative opioids such as alfentanil and remifentanil [1-3].

Conclusions: The prescriptions should be clear, include preferably oral medications and a treatment regimen with regular times and dosages, followed by rescue dose of a second drug to be administered if the pain becomes intolerable (VAS >5 or intense pain on a simple verbal scale). Ideally, the patient should be motivated to maintain the contact with the reference center.

References


Presbycusis is one of the most prevalent neurodegenerative diseases of aging caused by changes in peripheral (cell loss in organ of Corti, spiral ganglion and stria vascularis) and central auditory systems (consequent to peripheral modifications or due to changes in the neurobiologic activity underlying central processing of auditory informations) [1]. Consequences are reduced sensitivity, tuning sharpness, compression, and reduced signal-to-noise ratios, deficits in auditory discrimination, temporal processing, processing of degraded auditory signals or when embedded in competing acoustic signals. Moreover there are many studies about the influence of environmental and genetic factors. Approaching biology of age-related hearing loss is complex: it needs to clarify some peripheral aspects with different cochlear structure and cellular type affected, and some other about central auditory processing. There are some peripheral induced central effects and others direct neurodegenerative changes in the brain. On the other side biochemical and mechanical injury in the course of life can represent risk factors related to auditory function, particularly for organ of Corti. This complicates the attempt to separate pure presbycusis from "socioacusis". Research indicated some "longevity genes" and longevity-promoting life-styles (obesity and correlated exposure, oxidative stress, ototoxic drugs, industrial solvents or combinations of these).

References

L58

Diagnostics and territorial experience

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Lymph-oedema is a chronic disease, not easily controllable with evolutive, progressive tendency. Since 2001 in the angiological outpatients' surgery inside of Operative Unit of Territorial Rehabilitation, in the ambit of patients affected by lymph-oedema, also the rehabilitative projects of geriatric patients affected by secondary post-surgery lower and upper limb lymph-oedema, contained the therapeutical programs, have been opening by angiologist and physiotherapist, in charge of the patient, together: in the older patients oncological lymph-oedema is more common than benign lymph-oedema tardum and furthermore, in the elderly most accompanying disease aggravate this pathology.

Lymph-oedema requires careful patient monitoring that consists of:
1. the first evaluation performed in the ambit of a multidisciplinary and multi-professional team that leads to the compilation of a specific clinical report and a rehabilitative project which personalized therapeutic programs, adequate to the treatment of disabilities according to the evolution stage. The clinical report, point of reference in the next check-up:
- anographical data, anamnesis, clinical examination, evaluation of articular limitations and eventual functional impotencies, volumetrical evaluation;
- instrumental examination: since 2005 we have been using Echo-colour-Doppler diagnostic useful for tissue examination because it provides important indications on structural characteristics of examined tissue; while the angiologist is carrying out the exam, the physiotherapist fills up a sheet contained a limb drawing useful for a more personalized therapeutical program;
- individual rehabilitation training project;
2. careful lymphological monitoring of patients to assess rehabilitative training effectiveness
3. patients’ follow-up: periodical medical check-up who performed physical treatment, to plan an eventual rehabilitative training based on clinical-instrumental case history.

Conclusions: Lymph-oedema requires personalized therapeutic programs and careful monitoring of patients to assess rehabilitative training effectiveness and to follow-up pathology evolution.

On our experience imaging provides important data which lead to an improvement in lymph-oedema management, helping the lymphologist and physiotherapist in the choice of precise strategies and therefore the setting up of personalized therapeutic programs, with subsequent therapeutic optimization.

Our territorial activity has highlighted how the integration of medical doctors, physiotherapists and nurses, according to their specific abilities, enables them to render the combined treatment efficient.

References

L60

The card of rehabilitative appraisal hospital worker in the PMIC

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The PMIC represents an important instrument for the arrangement and organization of the relative data of the patients hit from a cerebral ictus. In particular the appraisal card used during the rehabilitative phase concurs to consider numerous relative aspects to the patient with ictus, besides the identification of the given municipalities of pz (the sex, age, type of ictus, side hit, concomitant pathologies) it uses the Motricity Index, the Canadian Scales, the anamnestico Rankin and puts effect into them, the Depression scales, the presence of alteration of the sensibility, besides the identification of the giv-

L59

Personal experience on the use of PMIC

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Background: The Calabria group of the PMIC reports its experience, on the application of the protocol of minimal appraisal in some rehabilitative structures that represent the possible different settings for strokes in the Calabria Region. The total data will be exposed. The number of the collate cards exceeds 450 cases, thus constituting a meaningful collection of regional data that could be used in order to photograph the state of the patient with a stroke in Calabria and in order to program more and more appropriate rehabilitative intervention and settings, in order to rationalize the use of the employed resources.

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L61

Health residences: legal aspects

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Clinical and social background: “The HR offers to dependent subjects, elderly and not, with an outcome of physical illnesses, mental or sensory mixed, not treatable at home, an average level of medical, nursing and rehabilitation, accompanied by a high level of protect and hotel assistance, modulated according to the model of care adopted by the Regions and Autonomous Provinces (DPR 1401.97). The HR are intended to subject self-
sufficient, could not be treated at home, affected by geriatric neurological and neuropsychiatric stabilized diseases. Be expected: hospitality permanent relief to the family not exceeding 30 days, of completing education and rehabilitation possible initiatives in other principals of the NHS." Essentially the HR are the practical response to the needs of actual society, more and more elderly, with various care needs that can not be left solely to individual initiative resolver households. Depending on the provision of care to be paid, social workers and health board must ensure the adequacy of operation by the state of health of the subject admitted, in relation to "obligations of means" business activity, whereas the RSA however, is not a hospital or a nursing home.

Conclusions: Since the HR private structures, under the agreement with the Regional Health Service, operating according to specific rules, and receiving public money in respect of services rendered to citizens, thereby absolving - on behalf of the State - constitutional requirements under Article 32, can only portend a hypothesis of contractual liability in the event of default in the bonds due. Quality first documented in Nursing, where the minimum performance level or base has now increased and qualified for the presence in the so-called "modules" no longer mere performers but by professionals who graduated in Nursing. By providing the best qualified health RSA (medicalized HR) presence h24 nurses and the doctor working in the daytime, with possible assistance at night and weekend "on call" continuity of care or service or the Emergency and Urgency 118 Service, it is clear how the nursing care becomes - in these operational realities - an expression of the true guarantee of continuity of care and therapeutic. Remains decisive in achieving the overall objectives, the operational integration of all the skills, both in health and social vocation, so that the quality of care may be considered appropriate to the needs of users.

References

L62
Clinical Trials methodology and elderly
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Due to the ageing of the population and the sharp increase in life expectancy, cancer diagnosed in the elderly population is rising and it has become an increasingly common problem in the Western world. According to the National Cancer Institute (NCI), for all cancers combined, the incidence rate in people 65 and over is 10 times higher than the rate for younger people, and the mortality is 16 times higher. The number of people in the United States who are 65 and older is expected to double by year 2030. A study published in 1999 in the New England Journal of Medicine found that while 63% of people in the general population age 65 or older had cancer, only 25% of patient in that age group were represented in clinical trials. The cut-off point at which an adult is considered ‘elderly’ has not been well defined. Usually, age 70 years is considered a reference point and is commonly used in clinical trials in oncology. One of the most intriguing aspects of ageing is how different the ageing process is from person to person; the basis for this variation is largely unknown.

Clinical trials are generally used for the clinical development on new drugs/strategies. They are divided in three consecutive phases (I, II and III). The firsts two aim to characterize the action and to archive all knowledge necessary for better mange the experimental drugs. For all these reasons it is important to allow the inclusion of selected people without comorbidities that can interfere with the results. In contrast, phase III trials, considered the last step before registration, aim to demonstrate the efficacy/utility of the experimental drug/strategies on a number of patients representing the whole population of patients for a selected pathology.

If it is tolerable to limited the participation of elderly patients, for their frailty, comorbidities or different metabolism, in the inclusion of phase I or dose finding and Phase II trials it is not acceptable to exclude them in the large phase III.

Furthermore, it is now clear that Chronologic age cannot be used to predict the degree of comorbidity and of functional deterioration of the single individual up to age 85 at least; Performance status, which takes into account level of activity, ambulation, and ability to care for oneself and the presence of comorbid conditions that may be exacerbated by treatment are more reliable criteria for clinical trial eligibility than age.

In conclusion age alone should never make a patient ineligible for a trial.

L63
Rehabilitative therapy of elderly patients
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The aging of the population given to the improvement in life expectancy led to an increase both in absolute numbers that the importance of the older age groups. In parallel it has been observed in the time also an in the United States that cancer is the leading disability which generates more welfare and a higher cost for health and social care for society. Rehabilitation works on the individual as a whole considering needs, social context, environment and disability. Aims to reorganize the patients life to make the most positive experiences number, despite having suffered motor and cognitive limitations, to ensure a better quality of life.

Prerequisite for the attainment of these objectives are: the presence of a multidisciplinary team, the continuity of the therapeutic program, bearing in mind that, for the elderly, the acceptance of therapy, reduced functional reserves, the psychological attitude, operators and, not least, the family, are very important to obtain a good outcome.

In the geriatric field there are patients with multiple problems that are not disabling in themselves, which have a reduced physical ability that makes difficult the usual activities of daily living (such as the frail elderly who is in a nursing facility) but also subjects with specific disabling diseases, often associated with more diseases. The rehabilitative therapy can turn both the elderly patients at risk of disability and to those already disabled. In the first case it will aim to work on the functional loss that follows the interaction aging and disease, in the second it will try to recover the highest possible level of independence in the subjects already disabled.

An important role in this path of recovery and reorganization, dictated by the changes typical of senescence is of the physiotherapist, which has got the requirements of study and law suits for such intervention, ensuring scientifically proven results.

L64
Comprehensive rehabilitation course in adult hemiplegia: evaluation value, the PMIC
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Rehabilitation has a threefold problem regarding hemiplegia: the first is how to handle the single case to obtain the best result; second is to have a set of structures that allows follow up for the hemiplegic person in the whole rehabilitative course, step by step, phase by phase, according to his needs; third is to verify the reality of rehabilitative intervention.

To face the first and the second problem, post-acute clinic, intensive or extensive, outpatient departments, and the possibility “in-home” treatments are needed. A web of structures of different types is needed, working one after the other to avoid that “therapeutic lack” which causes more damage than the pathological event itself, or the advantages of hard rehabilitative work, for the patient, his family and the rehabilitative team, disappears.

For this reason, knowing if, when, where to start, to continue or to stop a rehabilitative course is extremely important and this can only be realized...
through a valid way of evaluation supporting scientific knowledge and clinic experience.

In the acute phase, a correct evaluation allows the definition of the best prognosis, the choice of the possible outcomes and the best setting in which to reach them. In the same way, the evaluation skill will enable the decision of when, where and how to continue the rehabilitative intervention or if consider it ended.

To face the third problem, an appropriate system of scales on which a series of evaluations can be founded is needed.

We all know that and so we use a scientific validated system of evaluation: PMIC, proposed by SIMFER first and then accepted and proposed to its member by SIRIN also, comes in this context with a particular value: to offer an identical basic evaluation protocol to all the users.

This protocol, studied with scientific accuracy, is divided in three sections as the three phases of evolution of the problem: acute phase (utilized during the hospital period in acute departments); confinement rehabilitative phase; territorial rehabilitative phase.

Knowing this population data could allow a more correct setting with no waste; plus it could allow the evaluation of the real efficacy of rehabilitative interventions and the real need of a social rehabilitative intervention on the residual impairment.

Working group SIMFER-SIRIN on PMIC in Calabria has a good experience on this protocol.

L65 Osteoarthritic diseases in the elderly: the challenge of rehabilitation
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During the third age, rehabilitative intervention has some particular characteristics, connected to, without any doubt, functional and biological characteristics, which are typical of this period of human life, and on the other side, connected to the common way to consider elderly people, by the elderly people themselves, by the caregivers and by the social community.

Too often pain, functional limitation, reduction of autonomy and of capacity to participate in life are considered normal, almost necessary, and accepted with resignation and without any opposition.

This common idea of the elderly person is in contrast with scientific literature data, which show only the request of a longer time in more young people to reach the goals and for their reintegration, without having serious cognitive deficits or important pathologies.

For this reason, fighting to change this negative common point of view about elderly age is a challenge belonging to “rehabilitation”. Consequently it’s important to improve the capacity of the elderly person (for example in a global vision like the bio-physical-social one proposed by ICF).

In a femur fracture, a hip replacement or a osseous synthesis surgery are less meaningful if they can’t bring the patient to walk, to stand up, to sit down, to climb the stairs and take care of himself, like he did before his trauma. If the interdisciplinary work of the rehabilitation team is well done and appropriate (from the beginning soon after the trauma and the surgery), if it is constant and sufficiently protracted, it must and can warrant this result. Besides it must involve not only the elderly patient who does rehabilitation but also his family and the institutional environment that surrounds him.

“Rehabilitation” has another challenge: to improve physical and functional conditions of elderly people to limit the use of drugs and surgery interventions. We are talking about interventions on osteoarthritics patients, but especially regarding intervention for the reduction of changeable risk factors of falls, which are the most frequent cause of fracture and its negative complications, including death.

We hypothesize that one is to intervene on the elderly population in general with AFA; the other one is to intervene on high risk elderly people through a specific work.

These kinds of interventions are normally collocated in the strict cooperation between hospital or university structures and local health service structures.
in connection with the social-field operators and the other health-operators (neurologist, neuro-psychologist, nurse), including “MMG” and geriatrician.

**L68**
The physical treatment and rehabilitation of osteoporosis
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Osteoporosis is a "disease characterized by decreased bone mass and deterioration of bone microarchitecture with consequent increase in bone fragility and fracture risk" (Consensus Develop Conference). Numerous studies have shown that even if Osteoporosis is a disease of old age, it finds its roots in the paediatric age: the amount of bone tissue depends on the skeletal assets that people acquire on the pinnacle of somatic development. It follows, therefore, that the importance of prevention should begin, in fact, right from pre-natal age. Prevention relies on a multidisciplinary program which should include education, adaptive changes of environment with possible home visits, assistance through a Physiatric counseling with patients and their families and implementing a program of individual exercise. Therapeutic exercise remains the cornerstone of the rehabilitative approach and its rational use in osteoporotic patients lies on its ability to cause a mechanical stimulation of the bone to allow an effect on bone remodeling in the sense of osteoblast stimulation. There are many studies that have sought a correspondence between physical activity and BMD. Osteoporosis should always be considered a preventable and treatable disease. Its treatment relies not only on drug therapy. Therapeutic exercises, although of undoubted value, is indeed set in the context of a more open-minded multidisciplinary program that includes food and behavioral hygiene, and specific therapeutic exercises, orthosis, up to the surgical treatment, that often represents the treatment in emergency fractures. The data in literature gives great importance to the young age, as the most suitable age to begin the physical activity because it is thus possible to reach a higher bone mass peak. Several studies show that prevention with physical activity should even start in an adolescent age to actually continue throughout the life period. A continuous physical activity regularly managed, avoids the collapse of bone mass that occurs after menopause. It is also fundamental not to suspend physical activity and to not return to baseline levels. In setting up a physiotherapy job we can apply multiple objectives. In this sense we can recognize as a primary endpoint the bone mass increasing (pursued through direct mechanical stimulation, use of local loads, improving aerobic capacity, strengthen muscles, using the force of gravity) and as a secondary objective the prevention of fractures (pursued through the improvement of balance and coordination, increasing of soft tissue trophism, the 'postural and ergonomic education to improve the range of motion).

**L69**
Hearing aids re-habilitation in aged people
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Presbyacusis is defined as the cumulative effects of aging on hearing ability. Each of them commonly feature different impairments, e.g. on: sound hearing (mostly for high frequencies), speech understanding (mostly in noise), delayed speech processing by NCS and sound source localization. Its fuzzy and unclear symptomatology frequently leads to a delayed detection. In addition, the affected subjects rarely contact a specialist in order to sharply deal with such occurrences. Furthermore, whenever the presbyacusis is detected, only a small amount of patients will use hearing aids. To date, in US only the 20% of people supposed to need a hearing support, wear hearing aids and the 25-40% of those patients either leave or use them unevenly. Aims of this report are:

- to examine the reasons leading people affected by presbyacusis to rarely wear hearing aids
- to verify the possible technical hitches on fitting hearing-aids to aged patients (prosthetic grading), in order to provide them with correct rehabilitation pathways to an adequate sound and speech perception.

The last part of this work concerns the rehabilitation issues for subjects affected by a multi-sensorineural impairment (e.g. deaf-blindness).

**L70**
Desflurane why this choice?
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In considering the future role of the volatile anesthetic desflurane (Suprane®) in modern anesthesia practice, it is important to first consider the factors that contribute to a successful anesthetic in this increasingly day surgery orientation. An optimal anesthetic for the new millennium would include the following characteristics.

1. It should have a rapid and smooth onset of action. Efficiency is a particularly important factor in the ambulatory setting [1].
2. There should be a rapid recovery of cognitive functioning without clinically-significant discomfort. Postoperative pain is a major limiting factor in determining when a patient can be discharged home after surgery.
3. The absence of adverse effects such as nausea and vomiting is extremely important as emetic symptoms affect not only recovery times but also the incidence of unanticipated hospital admissions after day-case surgery, and patient satisfaction with their overall anesthetic experience.

The low solubility of desflurane contributes to rapid emergence after anesthesia. Compared with sevoflurane, recovery times to eye opening, response to verbal commands, and orientation to person, place, and time have been found to be significantly shorter with desflurane [2-4]. When compared with the rapid, short-acting intravenous anesthetic propofol for induction and maintenance of anesthesia, desflurane displayed more favorable early recovery characteristics and facilitated the fast-tracking process [4,5]. Although patients receiving desflurane are less sedated in the early postoperative period than those receiving propofol, times to ambulation and discharge were similar. Given its favorable early recovery profile, desflurane would appear to be a useful alternative to isoflurane, sevoflurane and propofol for maintenance of anesthesia in a busy practice environment where early discharge is one of the major goals (e.g., cardiovascular, neurosurgery, day-case surgery).

In conclusion, desflurane is the maintenance anesthetic agent of choice in a fast-tracking practice environment.

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L71
Osteoporosis: epidemiology, clinical and biological aspects
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Osteoporosis is the most prevalent disease of bone metabolism, characterized by fragility and risk of fracture. The frequency of fractures increases with age and the cost of this disease increases more and more. Every thirty seconds someone in European Union suffers a hip fracture as a result of osteoporosis. The fractures of wrist, hip and vertebra are the most prevalent. Now the bone quality is more important than the BMD. The evaluation of patient begins with the analysis of risk fracture: age, familiarly of fragility fracture, calcium and vitamin D intake, BMI less than nineteen, early menopause, smoking, alcohol abuse, risk of falls. The people with at least one of these risk factors have to do the analysis of BMD, by DEXA at the femur or ultrasound at the fingers or the heel. The relationship between the BMD and the clinical situation of patient is important in order to understand who has to do the blood tests and the xray of dorsal and lumbar spine in LL. The blood exams need to differentiate the types of osteoporosis, to value the bone markers and vitamin D. I remember that the vitamin D level is important for the calcium, the bone and the muscle metabolism and for the good action of the drugs of osteoporosis. The X-ray of dorsal and lumbar spine needs to show the presence of vertebral fractures. We have to calculate the level of fracture and the SDI (Spine deformity index) by Genant’s SQ scale. At the end I show the therapy of osteoporosis and its criterion.

L72
The risk of falling
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The risk of falling represents one of the essential elements of the relationship elapsing between osteoporosis and rehabilitation activity. The damage received from the falls represents the sixth cause of death in persons over 65 years old.

The risk factors for falling have been classified in two great groups: intrinsic factors and not intrinsic factors. Between the main intrinsic factors there are the muscular weakness, the deficit of equilibrium and coordination, the deficits of propriocettivity.

Between the not intrinsic factors there are use of some drugs and the lack of security measures in the domestic atmosphere. The bathroom in particular represents the room of a house where there is a greater risk of fall.

The most recent present studies in literature, such as the appraisal of this risk, must be conducted in multi-parametric way. A series of specific semieiological tests exist for the appraisal of some of these risk factors (chair test for the appraisal of the muscular weakness, for example).

This semieiological appraisal can be completed from the data that can be obtained from the administration of FIM scale and ICF classification through the check list in the short form version.

References

L73
Monoclonal gammopathies
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Clinical background: The finding of a monoclonal immunoglobulin in the serum defines the so-called monoclonal gammopathy. Monoclonal components are homogenous immunoglobulins whole (intact) or fragmented, produced by a single expanded plasma cell clone. MCs present unique physicochemical homogeneity, which is reflected in their immunological homogeneity. Immunological homogeneity by electrophoresis is shown with the appearance of a compact band which possesses only a single type of heavy and light chains.

 Protein electrophoresis is, therefore, a main method in the laboratory of clinical chemistry in particular for the relief and the quantification of Monoclonal Components [1-4]. Together with the traditional techniques of electrophoresis on cellulose acetate or agarose gel, other analytical approaches are emerging to highlight and quantify the CM. In particular, in recent years, several authors have emphasized the usefulness of capillary electrophoresis both to highlight the CM and for their quantification [5,6]. We considered appropriate to determine, on a personal case study:

The performance of capillary electrophoresis to show small, medium and large monoclonal components comparing the data obtained by this technique with those obtained with traditional techniques, particularly with agarose gel electrophoresis.

We performed the quantification of the CM both in capillary electrophoresis and through conventional densitometry. Assessing sensibility of the two methods to show the CM by determining the minimum detectable concentration of CM with the two methods.

Conclusions: Capillary electrophoresis has proven a reliable method in highlighting and quantifying CM and besides involves operational advantages such as fully automated execution, the operating speed is extremely limited and performers need a lower experience. This is translated into more reproducible constant results over time. It’s important, however, to emphasize the need for a careful examination of the electrophoretic paths obtained. Often, in the presence of CM, only slight modifications of the path are observed that could escape a careless observer. When in doubt, immunofixation will still solve the problem.

References

L74
Thrombocytosis
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Background: Thrombocytosis is defined as an increase in the number of circulating platelets than the normal value of between 150,000 and 250,000 platelets/μL. The limit beyond which the state of platelets is usually marked in platelets is defined as 400,000/μL.
Trombocytosis are divided into primary or autonomous, in the course of myeloproliferative disorders (essential thrombocythemia, polycythemia vera, chronic myelogenous leukemia) and secondary or reactive. The primitive forms having a common origin as stem cells of the bone marrow, and, although each has specific characteristics, often the clinical picture overlaps, making it difficult to secure a diagnosis between these four diseases. Indeed, essentially trombocytosis is always an increase in platelets, but this can also occur in the other three diseases, also in idiopathic thrombocythemia, sooner or later, during the course of the disease, you may have increased white blood cells and, very rarely, even red blood cells. The duration of secondary trombocythosis is variable and tied to the possibility of removing the underlying disease. The diagnosis is based on the finding, the examination emocomocimetrico, a higher platelet rate than 400,000 items for UL with volume, morphology and platelet function is normal, and the search for possible pathological conditions that led the platelets. Mieleroproliferative diseases should be excluded from the platelets, including essential thrombocythemia, which in addition to specific hematologic abnormalities, have higher rates with strong anisomacrocytosis platelet-platelet, and more frequent bleeding or thrombotic. Several studies have shown that in most patients with polycythemia vera and in about half of those with essential thrombocythemia or idiopathic myelofibrosis, it is a single nucleotide mutation that activates JAK2.

**Conclusions:** JAK2 mutations appear to confer hypersensitivity to hematopoietic growth factors and a selective advantage for growth marrow precursors carrying the mutated gene compared with normal or wild type precursors. Recently it was discovered a point mutation dependent kinase JAK2, which involves replacing a thymine with guanine nucleotide sequence, resulting in the appearance of a valine residue instead of phenylalanine in position 617 of the amino acid sequence or JAK2617V > F. This mutation appears to be myeloid-specific and can be used for the differential diagnosis between primitive myeloproliferative disorders and secondary forms of poliglobulia or thrombocytosis.

**Reference**

**HEALTH PROFESSIONS**

**L75**

**Drug therapy: preparation, administration and disposal**

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The role of nurses: Nursing literature are shown in a series of general controls to be carried out in order to eliminate or minimize the possibility of occurrence of errors during the process of administration of therapy.

These controls include: ✓ registration of prescription drugs;
✓ Rule of 6 G.

**For registration of the prescription** means the need for a prescription (written) found in the medical and/or folder nursing. The prescription of a drug must appear seven elements that provide adequate completeness of information than what is being administered and the person to whom it is administered:

1) the person's name,
2) the date of the prescription,
3) the name of the drug,
4) dosage,
5) route of administration,
6) the frequency of intake,
7) the signature of someone who has prescribed therapy.

**Types of prescription:** - Current prescription,
- Second protocol,
- Prescription as needed,
- Emergency prescription: drugs,
- Requirements and telephone records;

**The rule of 6 gs:** 1. The right drug: compare the prescription with your treatment, knowing the action of the drug, dosage and route of administration, side effects, incompatibilities with other drugs;
2. The right person: to check the person's name and number of bed with one written on the card of therapy, if you ask the person their name and surname;
3. The right time: this factor is controllable when you decide on the distribution of the therapeutic dose daily. Often the doctor prescribes how many times a day to administer the drug, the nurse will then determine the correct time in order to maintain its constant blood level over 24 hours;
4. The right route of administration: any drug can have multiple routes of administration that need to know. Some formulations may be administered by one route, such as intravenous, others need to change the type of solvent, depending on the route of administration;
5. The right dose: is always advisable to check the correctness of dosage;
6. Proper recording: to record the registration tab of therapy with the signature of the nurse.

**L76**

**Prevention of adverse events in the administration of drugs**

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Incorrect use of drugs may cause adverse events with serious consequences for patients: Adverse event (Adverse events) refers to
an event related to the care process and which involves an injury to the patient, unintended and undesirable. Errors in drug therapy (also called error of therapy) are predictable events that may cause or lead to the inappropriate use of the drug or a threat to hospitalized patients, which may occur during the process of managing the drug for prevention and therefore should be considered by the whole management system of healthcare. These events, predictable and avoidable must be differentiated from the adverse drug reactions (ADR-Adverse Drug Reaction), linked to the drug itself and that are detected and evaluated by pharmacovigilance.

The causes of errors in therapy are multifactorial and involve different health professionals. Basically 5 categories of error are recognized.

- Error limitation
- Clerical error/interpretation,
- Error processing;
- Error distribution
- Administration error

Error limitation: The error of prescribing may relate to the decision to prescribe a drug, and the process of writing the prescription (quality and completeness of essential information).

Clerical error/interpretation: Errors occur when the prescription, while still written by hand, is not properly recorded on the therapy.

Preparation errors: After the prescription, preparation is the most critical phase in the process of administration of the drug in the hospital.

Distribution: The distribution of medication errors occur both when it is distributed by hospital pharmacy departments and clinics and as when it is distributed directly to patients.

Administration: The error of administration can be considered as a deviation between medication that your doctor has prescribed according to proper standards of clinical practice and the drug received by the patient.

Conclusions: Currently examining the data in the literature, it is clear that the strategies adopted to reduce errors in therapy are as follows:

1. Computerized systems for registration of therapy,
2. Distribution of drugs in unit doses (with different levels of self-medication),
3. Active participation of clinical pharmacist management of therapy.

L77 Proper nutrition in older people
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Older people gradually begin to eat less and badly, discovering early on that nutritional deficiencies do not run into recently. A study published in the Journal of the American Dietetic Association reports that are to come under especially micronutrients such as vitamins and minerals, quoting that over half of people over 50 and elderly people are trying to contain the damage through supplements, but in some cases they are not sufficient, even excessive in others. Despite continuing advances in medicine, nutrition, geriatric patients is a weakness in the correct therapeutic management. Several case studies report that in geriatric patients, protein-calorie malnutrition shows a prevalence ranging from 25/60% up to 85% in elderly patients in long-stay facilities or RSA.

Malnutrition causes a compromised immune system, increases the risk of infections, delays wound healing, leads to a progressive worsening of clinical conditions of older people. The deterioration of the nutritional status in the elderly appears to be a quick process and difficult to reverse; advanced malnutrition is more difficult to correct in the elderly than in the young.

Morbidity in the elderly increases through malnutrition, as does the hospital stay, complications, hospital readmissions, early institutionalization and mortality.

Malnutrition reduces the quality of life as it leads to disease, lower functional capacity, rapidly developing chronic disability. It also involves repercussions from an economic standpoint, because, it causes an increase in health expenditure.

It is therefore necessary that the elderly be treated in order to block the alterations of physiological adaptation processes that create situations of great risk due to the intake of nutrients that can lead to failure in the elderly frail cord, a condition that must be promptly recognized and addressed.

The integration between the different professionals working in health assistance to the elderly becomes essential for the prevention, diagnosis and treatment of malnutrition in the geriatric population. A target population will be crucial for future medicine, and therefore is not eligible for the ‘existence of a malnourished elderly patient in a society in which scientific evidence and the amount of resources, including food, are abundant.

L78 Logopedics management in neurovascular diseases
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The Neurovascular diseases acquired are of great social impact, they are the second cause of death in the world and the most frequent cause of disability in adults.

The role of speech therapy in the management of this long process of care. He must manage the rehabilitation and/or the rearrangement of several functions, as well as social problems related to families, work and school.

The patient with severe brain injury in addition to the symptom of aphasia which is the most evident of different origin etiology pathogenesis, will, in addition to symptoms of expression of cortical impairments responsible for other functions, including other brain impairments of other body structures in subjects treated with certain medications, in a social and emotional detail and with a history of the all subjective.

In all this, what is most important for the speech therapist is taking charge of cerebrovascular patients to be made following the evidence based on experience that can contribute to a core-competence.

L79 Intercompany meeting of the health professions
V Piraino
The health professions in Calabria and the elderly patient. Speech therapist - Operating Unit of Rehabilitation (Lamezia Terme) A.s.p. of Catanzaro, Italy
BMC Geriatrics 2010, 10(Suppl 1):S79

The rehabilitation, within the whole culture of disability, is configured as the central moment of doing rehabilitation which is related to the activity of the “person” in its entirety and complexity. The concept of “quality of care” reported the citizen at the center of interest of operators called to play a practice increasingly effective, timely, continuous, secure, appropriate (respecting the centrality of the assisted).

The theme of neurological diseases, which affect the adult compromising important functions for the quality of life, is a field of great interest for the speech- therapy clinic, amplified in recent years by epidemiological data and incidence of disease responsible for these deficits. “Aging isn’t in itself a disease”: today the elderly independent people unable to manage themselves play meaningful social rules. In Europe, in all nation as well as in our region, taking in the challenge of the aging well, mean especially invest in preventive health policies. Unfortunately though this seems an established fact, seems that this situation is not addressed in a constructive manner.

Estimate that the percentage of population over 65 age of years, will reach 34,4% in 2050. Those over 80 should reach 14.2% compared to 4.3% today. This sort of demographic revolution reinforces the right the right to health enshrined by the Constitution and meanwhile infuses law the duty to sustain it over time. The lengthening of life expectancy should be evaluated with optimism although parallel will increase the absolute number of people with severe limitations. Therefore are indispensable various preventive and curative interventions that society will impose. Seems clear that this situation must be addressed and monitored for resource planning and supply of care services, employees in large part of health systems’ budgets, often intended to contain and rationalize the expenditure.
In the field of neurological diseases of the adults, unfortunately are reported dramatic expectations in the answer of taken charge, particularly in our region, the most disadvantaged, where there is the phenomenon of migration. In an alarming situation, there are, however, important experiences and centers of excellence also qualified by the virtuosity of many professionals who collaborate in teams rehabilitation, quickly operational, with involvement also of users’ associations. Agency professional in carrying out the activities of its sole responsibility to be seen in a perspective of collaboration with other professional, in a total commitment to the political, civil, scientific sphere raises uniting the provision of public services and the guarantee systems for users.

L80
Case management of a person with disorders of language and identification of case managers in rehabilitation
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The main neurological and neuropsychological disorders related to vascular attacks or strokes, chronic degenerative diseases such as Parkinson or Alzheimer, incidental factors such as cranial cerebral trauma, cognitive decline of elderly, occupy a large part of the clinic of the speech therapist because of aspects of specific competence (communicative, cognitive-linguistic and oral functions). Deficits such as aphasia, dyspraxia, dementia, unravelling and other neuropsychological disorders are conditions that necessarily require a multidisciplinary intervention. Rehabilitation, with whole culture of disability related to it, is configured as the central aspect of doing rehabilitation that is related to the activity of the “person” in its entirety and complexity. The concept of “quality of care” presents the citizen as the center of interest for operators called to carry out an increasingly effective, timely, continuous, secure, appropriate practice (with respect to interpersonal communication centralizing the assisted).

The competence of the speech therapist consists of three components: the knowledge, the skills, the behavior; that “knowing how to act on the whole that guarantees quality, that allows the identification of the best practice through the use of multidisciplinary and professional operational tools, that amends and aligns the behavior of professionals. The proper assessment with standardized instruments is also important, which bring forth the objectives in the short, medium and long term.

In the field of neurological diseases in adults, unfortunately dramatic expectations are reported in the response to early therapy, particularly in our more disadvantaged region, with the phenomena of migration. In an alarming situation, there are, however, important experiences and centers of excellence also qualified by the virtuosity of many professionals who collaborate in quickly operational teams rehabilitation, also with the involvement of users’ associations.

Aim of the seminary is to compare the forces still operative in the field spatial with other operations experienced in other regions, for the sharpening of an uniform model of the “management of the elderly patient in our region” and consequent testing of validity. All rejecting the Guidelines and recommendations resulting from the study of the scientific evidence that in the last two years involved authoritative representatives of the profession, scientific societies and organizations representing national.

L81
The management of bladder incontinence in the elderly
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Bladder incontinence is present in all age groups. But risk factors such as increasing age, degenerative diseases, intervention due to prostatic diseases, metabolic or neurological disorders which are typical of an advanced age result in a challenging reality to face.

It’s a widespread custom to consider incontinence as a disorder or a natural consequence of aging; on the contrary, it is a disease that responds well to various treatments. Urinary incontinence of the elderly is a complex issue because it determines significant changes in personal lifestyle causing serious psychological states of depression. Losing control of our body basic functions can lead busy people to lifestyles never before considered, often self-limiting. The item requires an integrated approach to the various professions in order to allow people the best quality life.

Good advice and information can help to handle and resolve one of the main causes of hospitalization or long stays in healthcare facilities.

LATE ABSTRACTS

A114
Mast cells positive to Tryptase correlates with protease-activated receptor-2 expression and microvascular density in breast cancer patients
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Background: Angiogenesis is an important pathway in tumour growth and progression. Angiogenesis is regulated by several classical factors, Vascular Endothelial Growth Factor being the most important. On the other hand tryptase, a serine protease stored and released from mast cells (MCs) granules has been identified as a new non-classical angiogenic factor. Tryptase is an agonist of the proteinase-activated receptor-2 (PAR-2) a G protein involved in cellular proliferation and angiogenesis. In this study, we have evaluated the correlations between the number of MCs positive to tryptase (MCDPT), the number of breast cancer cells positive to PAR-2 (BC-PAR-2) and microvascular density (MVD) in a series of 97 primary T1-3, N0-2 M0 female breast cancer by means of immunohistochemistry and image analysis methods.

Materials and methods: Six-micrometers thick serial sections of formalin-fixed and paraffin-embedded bioptic tumor samples were obtained. Then sections were microwaved at 500 W for 10 min. and treated with a 3% hydrogen peroxide solution. Sections were incubated with primary human-specific antibodies: monoclonal anti-tryptase (clone GA1; Dako, Glostrup, Denmark), goat polyclonal anti NH2 terminal of PAR-2 (clone N-19; sc-8206 Santa Cruz Biotecnology), and monoclonal anti-CD34 (QB-END 10; Bio-Optica Milan, Italy). Biotinylated secondary antibody, avidin-biotin peroxidase complex, and 3-amin-9-ethylcarbazole were in turn utilised. In serial sections “hot spots” were selected at low magnification and both individual vessels, single tryptase-positive MCs and breast cancer cells positive to PAR-2 were counted at x400.

Results: Data demonstrated a significant correlation between MCDPT, BC- PAR-2 and MVD to each other (r ranging from 0.71 to 0.87; p: ranging from 0.001 to 0.003 by Pearson’s analysis respectively). No correlation concerning MCDPT, BC-PAR-2, MVD and the main clinical pathological features was found.

Conclusions: Published in vitro data suggest that tryptase may increase capillary growth and endothelial cell proliferation. On the other hand tryptase induce angiogenesis by activation of PAR-2 in vascular endothelial cells and breast cancer cells lines. According to these experimental data our results suggest that tryptase-positive MCs, PAR-2 and MVD parallel to each other thus underlying a role in vivo breast cancer angiogenesis. In this context several tryptase inhibitors such as gabexate mesilate and nafamostat mesilate might be evaluated in clinical trials as a new antiangiogenic drugs.

Acknowledgements: This work was supported in part by grants of Alleanza Contro il Cancro - Istituto Superiore di Sanità, Ministero della Salute, Italy.
Presbycusis is one of the more prevalent neurodegenerative disease of aging. There are many studies about the influence of environmental and genetic factors. Age-related hearing loss is caused by changes in peripheral (cell loss in organ of Corti, spiral ganglion and stria vascularis) and central auditory systems (consequent to peripheral modifications or for changes in the neurobiologic activity underlying central processing of auditory informations) [1]. Consequences are reduced sensitivity, tuning sharpness, compression, and reduced signal-to-noise ratios, deficits in auditory discrimination, temporal processing, processing of degraded auditory signals or when embedded in competing acoustic signals. Approaching biology of age-related hearing loss is complex: it needs to clarify some peripheral aspects with different cochlear structure and cellular type affected, and some others central auditory processing aspects. There are some peripherally induced central effects and others direct neurodegenerative changes in the brain. Moreover biochemical and mechanical injury in life course can represent a risk factor for auditory function particularly for organ of Corti. This complicates the attempt of separate pure presbycusis from socioacusis. Research indicated some “longevity genes” and longevity-promoting life-styles (obesity and correlated conditions like hyperlipidemia, hypercholesterolemia, hypertension, hyperhomocysteinemia and cardiovascular disease, smoking, diet and diabetes [2,3]. Age-related hearing loss seems to occur more frequently in industrial population than in non-industrial [4]. The relation between alleles pro or against-aging and environment maybe play a determinant role in the evolution of hearing with aging. Until such genes are identified, the best strategy is to reduce environmental risk factors (noise exposure, ototoxic drugs, industrial solvents or combinations of these).

References

L82
Age-related hearing loss: biological aspects
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The possible occurrence of labyrinthine disorders linked to hemodynamic imbalances has been widely outlined [1-4] and well demonstrated by clinical observations concerning both young and healthy people [4] and subjects suffering from cardiovascular affections as hypertension - the prevalence of tinnitus was studied in patients under antihypertensive [5] - or heart failure of variable severity [6]. In all cases, a possible influence of a sharp decrease in the values of blood pressure followed by an abnormal vasomotor reaction was postulated to have some role in the genesis of the disorder, mostly when considering that blood supply of the inner ear is of terminal type. In the elderly, the problem is even more complicated by the frequent presence of isolated systolic hypertension, which is characterized by the lowered compliance of the vascular tree, presenting with an increase of the arterial stiffness and reported to be due both to age-related loss of distensibility in the major central arteries and to endothelial dysfunction [7]: this increases, in general terms, the risk of transient hypoperfusion to an organ with a terminal circulation as the labyrinth and represents a crucial factor to deal with when treating hypertension in elderly. Moreover, the possibility of the so-called "hypertension-hypotension syndrome" [8], i.e. the coexistence of supine hypertension and orthostatic hypotension as a result of dysautonomia [7] represents a further complication in this sense. Hence the necessity of choosing, when possible, an antihypertensive therapy able to protect the life (QoL) but also decrease patients’ compliance to therapy. Malnutrition is an independent predictor of mortality and poor outcome. Pulmonary Function Test (PFT) is essential for the diagnosis of COPD, but it’s still unclear if criteria defining airflow obstruction commonly used in adults (GOLD guidelines [2]) have the same specificity if applied in elderly patients, thus resulting in over-diagnosis. However, older patients have an impaired symptoms perception, therefore COPD could also be under-diagnosed in this population. Acute exacerbations result in worsening of symptoms and often require additional treatment and hospitalization, and may cause a faster decline in lung function and QoL. The management of elderly patients with COPD should encompass a multidisciplinary approach. In addition to the assessment of lung ventilatory performance and functional impairment, an evaluation of patients’ nutritional status and mental health should be undertaken. Significant underlying co-morbidities should also be evaluated and treated to improve outcome. Specific therapy for COPD should start with cessation of exposure to tobacco smoke, the most important risk factor. Smoking cessation rates in the elderly have not declined, and this may reflect an underlying reluctance by physicians to counsel and offer smoking cessation therapies to the elderly. Bronchodilators and corticosteroids, the most used medication for COPD, do not decrease mortality in opposition to inhaled oxygen therapy, and they are primarily used for symptom relief. However they have a beneficial effect on QoL and exacerbation rates. The choice of delivery devices for inhaled medications is important in the elderly, and patients’ should be properly trained to a correct inhaler use and their dexterity should be frequently assessed. Pulmonary rehabilitation and nutritional supplementation are other important components of the comprehensive care [3]. End-of-life issues should also be adequately addressed in the elderly with COPD and an approach integrating curative and palliative interventions is strongly recommended.

Reference

L84
The fragility of the hemodynamic balance in the elderly: possible influences on the inner ear
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endothelial wall and to avoid brusque falls of peripheral oxygenation which could damage the inner ear.

References


Cite abstracts in this supplement using the relevant abstract number, e.g. Pirodda and Raimondi: The fragility of the hemodynamic balance in the elderly: possible influences on the inner ear. BMC Geriatrics 2010, 10 (Suppl 1):L84