MEETING ABSTRACTS

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MEETING ABSTRACTS

A1
Ruptured aneurysm: therapy of abdominal compartment syndrome post EVAR
Vittorio Alberti*, Pierluigi Costa, Stefano Fazzini, Eugenia Serrao, Sonia Ronchey, Nicola Mangialardi
Unit of Vascular Surgery, San Filippo Neri Hospital, Roma, Italy
E-mail: vittoriaalberti@libero.it

Background: Endovascular treatment of ruptured abdominal aortic aneurysms (r-EVAR) has the potential to offer improved outcomes. A frequent cause of post-operative mortality following ruptured aortic aneurysm repair is multi-organ failure (MOF) as a consequence of abdominal compartment syndrome (ACS). We reviewed our experience to identify predisposing factors for ACS (Fig. 1) and a way for its treatment.

Materials and methods: From January 2005 to December 2009, 53 patients underwent emergent endovascular repair of r-AAA. We mainly used bifurcated prostheses (44 patients), apart from 5 cases of aorto-uni-iliac device and 4 cases of straight endografts. Nine patients developed ACS and were submitted to abdominal decompression by retroperitoneal surgical drainage (Fig. 2).

Results: Thirty-day mortality was 22.6% (12/53). Early mortality was recorded in unstable patients only. Stable patients (24) had no mortality in the first 30 days. Among patients who underwent retro-peritoneal drainage, the 30-day mortality rate was 33.3% (3/9). At a median follow up of 34 months (33.8 ± 17.0) 3 patients died of aneurysm or procedure related causes.

Conclusions: One of the priorities in the management of r-EVAR is to prevent and eventually treat the ACS. A surgical evacuation of the retroperitoneal hematoma through extraperitoneal access has considerable advantages, mainly in high risk and older patients. In r-EVAR the particular factor is the retroperitoneal hematoma. Therefore we perform abdominal decompression via retroperitoneal access.

References

Figure 1(abstract A1) Chain of events triggered by retroperitoneal haematoma.

Figure 2(abstract A1) Surgical retroperitoneal access.
In 3 months 41 patients were selected, similar in age (65-78yo), sex and ASA class, undergoing elective surgery. Patients with lung, liver, kidney, brain and coronaric dysfunctions with ASA III-IV were excluded from the study.

In this single-blind, prospective study patients were randomized in 2 groups: patients in P-group were treated with propofol (5-8 mg/kg/h), while patients in S-group were treated with sevoflurane (1-2%).

Dosage was managed so that CF and AP wouldn’t shift more than 20% their basal values. All patients were pre-treated with midazolam (0.03mg/kg), fentanyl (1μg/kg) and atropine (up to 0.01mg/kg). Anesthesia was induced using propofol (2mg/kg) and cisatracurium (0.2mg/kg). Patients were intubated and ventilated using O₂ (33%) and N₂O (66%). Analgesia during surgery was achieved using fentanyl (1μg/kg) 60min after induction and then using boli every 45min. Parameters monitored for each patient were: AP, CF, ECG, P₁O₂, ET CO₂, BIS and diuresis. Times for extubation, recovery room monitoring, eye opening and oriented motory and verbal response were recorded. MMSE was also taken.

Results: 41 Patients were selected (table 1), age 65-78, ASA II; groups were homogeneous in type and duration of surgery (120±67min).

Induction and intra-surgery dosages of drugs were similar between patients, as well as 2-hours post-operation pain-score. Extubation was quicker in S-group (6.8±4min) than in P-group (9.8±5min). BIS system score has shown quicker recover from sleep in S-group (table 2). Simple commands execution (eye opening, hand movement) and time-space orientation recovery (saying one’s own name and birthday) were quicker in the S-group as well (table 3). Discharge times from recovery room were similar between groups, as were results in MMSE.

**Table 1(abstract A3) Prospective, randomized study, patients selectedPatients total 41**

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<tbody>
<tr>
<td>S</td>
<td>P</td>
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<tr>
<td>21 pz. (9M/12F)</td>
<td>20 pz. (10M/10F)</td>
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**Table 2(abstract A3) recovery after sevoflurane or propofol suspension**

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<tr>
<td>S</td>
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<tr>
<td>6.8±4</td>
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<td>5.9±2</td>
<td>9.3±2</td>
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<td>10.2±2</td>
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<td>24±4</td>
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<tr>
<td>39±9</td>
<td>40±21</td>
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<td>3±2</td>
<td>3±3</td>
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**Table 3(abstract A3) monitored parameters**

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<tbody>
<tr>
<td>AP</td>
<td>S</td>
<td>P</td>
</tr>
<tr>
<td>Pre-operatory (mmHg)</td>
<td>94±2</td>
<td>94±2</td>
</tr>
<tr>
<td>Induction (mmHg)</td>
<td>116±5</td>
<td>100±8</td>
</tr>
<tr>
<td>Incision (mmHg)</td>
<td>80±6</td>
<td>109±9.5</td>
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<tr>
<td>Maintenance (mmHg)</td>
<td>83±2</td>
<td>74±7</td>
</tr>
<tr>
<td>Recovery (mmHg)</td>
<td>105±5</td>
<td>107±11</td>
</tr>
<tr>
<td>CF</td>
<td>S</td>
<td>P</td>
</tr>
<tr>
<td>Pre-operatory (b/min)</td>
<td>72±7</td>
<td>72±7</td>
</tr>
<tr>
<td>Intubation (b/min)</td>
<td>100±10</td>
<td>87±6</td>
</tr>
<tr>
<td>Incision (b/min)</td>
<td>81±9</td>
<td>88±11</td>
</tr>
<tr>
<td>Maintenance (b/min)</td>
<td>78±5</td>
<td>67±13</td>
</tr>
<tr>
<td>Recovery (b/min)</td>
<td>88±7</td>
<td>90±8</td>
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Conclusions: Sevoflurane shows the lowest periferal blood solubility and the lowest partition ratio amongst inhaled anaesthetics. This grants both quick induction and recovery. These properties associated with better hemodynamic stability during maintenance of general anesthesia make this drug favorable for the elderly patient, who often has defective cardiac homeostatic mechanisms, both due to advanced age and to other associated diseases.

References

**Table 1(abstract A4) Clinical findings of patients who underwent resection for pancreatic cancer**

<table>
<thead>
<tr>
<th>&lt;75 yrs (n=163)</th>
<th>&gt;75 yrs (n=49)</th>
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<tr>
<td>Gender</td>
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<tr>
<td>Male</td>
<td>88</td>
</tr>
<tr>
<td>Female</td>
<td>75</td>
</tr>
<tr>
<td>Operation</td>
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<tr>
<td>Pancreatectoduodenectomy</td>
<td>119</td>
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<tr>
<td>Total pancreatectomy</td>
<td>5</td>
</tr>
<tr>
<td>Distal pancreatectomy</td>
<td>39</td>
</tr>
<tr>
<td>Operative morbidity</td>
<td>51(31.2%)</td>
</tr>
<tr>
<td>Operative mortality</td>
<td>3(1.8%)</td>
</tr>
<tr>
<td>Median survival (months)</td>
<td>Disease-free</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
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</table>

**A4**

The effect of age on long-term survival after pancreatic resection for pancreatic cancer

Valentina Beltrame1, Federico Tona1, Margherita Moro1, Carmelo Militello1, Sergio Pedrazzoli2, Claudio Pasquali1, Cosimo Speri1
1Department of Surgery, Clinica Chirurgica IV, University of Padua, Italy; 2Department of Surgical and Gastroenterological Sciences, University of Padua, Padova, Italy

E-mail: csberti@libero.it

**BMC Geriatrics** 2011, 11(Suppl 1):A4

**Background:** The incidence of pancreatic cancer is increasing, and an increasing proportion of patients with pancreatic carcinoma is older than 75 years. After surgical resection remains the treatment of choice for pancreatic neoplasms, an increasing number of elderly patients are being referred for pancreatic resection. Although in the early 1990s there was barely an indication for major pancreatic resection in the elderly because of the high postoperative complication rate, mortality and limited survival time [1], more recently an acceptable morbidity rate and late outcome in patients with advanced age have been reported [2,3]. This retrospective study analyzed the effect of age on the survival of patients who underwent resection for pancreatic cancer.

**Materials and methods:** Data were collected on 212 consecutive patients who underwent pancreatic resection between January 2000 and July 2009 in our department, divided into two groups: group 1, patients under 75 years of age, and group 2, patients 75 years of age or older. The two groups were compared in terms of demographic features, comorbidities, and surgical procedures. All of the patients underwent standardized preoperative assessment of general medical conditions, blood tests, tumor marker CA 19-9 determination, abdominal CT scan, and when needed, magnetic resonance imaging or positron emission tomography. Surgical techniques included pylorus-preserving pancreatocaudoduodenectomy for tumors located in the body or tail. Total pancreactectomy was reserved for microscopic invasion of the line of resection. The morbidity and mortality rate included all complications or deaths after surgery until discharge from hospital. Age, stage, lymph node status, grading and radicality of resection were recorded as potentially prognostic factors. Statistical analysis was performed using the SPSS for Windows rel. 15.0. Patient overall survival and disease-free survival (DFS) were evaluated using the Kaplan-Meier method and compared with Log-Rank test. Independent prognostic variables were examined with a Cox regression analysis. Statistical significance was considered as p<0.05.

**Results:** There were 107 males and 105 females. 49 patients were 75 years old or older (24 older than 80 years) and 163 were under 75 years of age. Clinicopathologic features of the two groups are detailed in Table 1. There were no significant differences regarding gender, type of operation, pathological findings, morbidity and mortality rate between the two age groups. The tumor’s grading and radicality of resection were independent prognostic factors both for disease-free survival, and overall survival. Age did not influence disease-free or overall survival in univariate or multivariate analysis. In the group of patients of an older age, disease-free survival was influenced by radicality of resection and the stage of the tumor, while overall survival was significantly impacted only by the stage of the tumor.

**Conclusions:** The results of the present study strongly suggest that age should not be considered as a contraindication for major pancreatic resection in pancreatic cancer patients. Postoperative morbidity and mortality are not statistically different in the two age groups. Similarly, disease-free and overall survival of patients 75 years or older undergoing pancreatic resection are not substantially different from the survival expected in younger patients.

**References**

**A5**

TEM in the treatment of recurrent rectal cancer in the elderly

G Benassai1,2*, S Perrotta1, V Desiato1, G Benassai3, G Mazzi2, G Quarto1
1Dipartimento di Chirurgia Generale, Geriatrica, Oncologica e Tecnologie Avanzate, Italy; 2Facoltà di Medicina e Chirurgia, Università degli Studi di Napoli Federico II, Naples, Italy

E-mail: v.m.desi@tin.it

**BMC Geriatrics** 2011, 11(Suppl 1):A5

**Introduction:** Transanal endoscopic microsurgery is a useful technique of minimally invasive surgery that allows the realization of complex interventions, from transanal excisions to full thickness resections with anastomotic reconstructions. TEM can have a diagnostic and therapeutic value in the elderly for the treatment of primary rectal cancer as well as for recurrences.

**Materials and methods:** During the period between January 2002 and December 2009 six patients, average age of 66 years, four men and two women, with early diagnosed rectal cancer recurrence were selected to undergo this palliative surgical procedure. 3 men and 1 woman underwent “ultra-low anterior resection”, followed by chemo / radio therapy (T3N1M0); in one woman a TEM (T1N0M0) and in one old man the local excision was performed after neoadjuvant chemo/radio therapy (T2N0M0). The selection of the patients was made by: rigid sigmoidoscopy, transrectal us, colonoscopy, abdominal us to rule out liver metastases, CT and MRI abdomen and pelvis with and without contrast agents, PET CT. In all patients the lesions were superficial, smaller than 2 cm and located at the posterior wall of the rectum.
Follow-up was approximately 12-28 months; the pathologic results of the patients were then referred for more complementary therapies. Only one patient presented a retro rectal abscess treated with conservative techniques, too.

Conclusions: The alternative to conservative surgery is an abdominopерineal resection sec. Miles, but also this really invasive procedure can be considered palliative in the most part of recurrences. So, based on equal oncological results, the reduction of surgical trauma and preservation of anatomical integrity are really important goals.

References

A6

Unit of Vascular Surgery Rummo Hospital, Benevento, Italy
E-mail: enrico.cappello@yahoo.it
BMC Geriatrics 2011, 11(Suppl 1):A6

Background: The traditional surgical treatment for abdominal aortic aneurysm (AAA) is now well codified in vascular surgery with a perioperative mortality rate that has gradually declining in recent years. The introduction of endovascular techniques has led the indications for surgery to be reviewed. The results of surgery in patients over eighty are fairly well defined: it is encoded that age affects only a small part of the immediate results in terms of overall mortality, while it is a significant factor in increasing rates of perioperative major morbidity, in particular cardiac and respiratory diseases. The purpose of this article is to assess the octogenarian patients who are not candidates for treatment with endoprostheses.

Materials and methods: The characteristics of the proximal neck, distal and size influence the feasibility of enables and results of endovascular treatment. All patients who do not respect these features are handled by us with traditional surgery. The high prevalence of ischemic heart disease in patients with AAA is a major cause of morbidity and mortality (46.2% of early mortality, late mortality of 17.7%) in the surgical treatment of AAA (Won et al. Validation of selective cardiac evaluation prior to aortic aneurysm repair).

Literature data show that if coronary angiography is performed routinely in patients with AAA awaiting surgery, the frequency of hemodynamically significant stenosis varies from 46 to 75% (Utoh et al.). For the reasons that all patients, twice in our experience can not be treated by endovascular undero coronary angiography before surgery for AAA.

Results: In our series, since 2002, we have operated on 560 patients of which 282 are of AAA ultra octogenarians. Of these, 224 have been processed with endoprostheses and 58 to surgical repair of aortic graft. 100% of those operated with traditional surgery had a short proximal neck, in 70% with the involvement of a renal artery aneurysm. 42% of all patients had a coronary heart disease that was treated preoperatively with coronary stents. Among the octogenarians the operative mortality of patients undergoing surgical repair for AAA was 4%.

Conclusions: The advent of endoprostheses has certainly improved the survival rate and morbidity of elderly patients with risk of AAA rupture. A selection of the patients, careful study of cardiac risk and treatment of coronary artery disease and carotid artery before surgery are prerequisites to reduce perioperative complications.

References

A7

Prognostic value of Multidetector Computed Tomography of cirrhosis

A D’Andrea1, A Reginelli1, M Petrolito1, F Iacobelli1, S Cappabianca1, R Grassi1, L Brunese2, A Rotondi1
1Section of Radiology, Department Magrassi-Lanzara, Second University of Naples, Italy; 2Department of Radiology, Health Science, University of Molise, Campobasso, Italy
E-mail: reginelli@tin.it
BMC Geriatrics 2011, 11(Suppl 1):A7

Background: Liver biopsy is an invasive test used to diagnose chronic liver disease and to assess the degree of hepatic inflammation and fibrosis. In recent years the accuracy of noninvasive tests has increased. The aim of this study was to evaluate whether the hepatic attenuation
detected at triphasic MDCT was related to the degree of cirrhosis and allow the prognosis in human patients to be established. Afterwards we have also defined the parenchymal structural alterations and vascular changes detected by CT in an animal model of hepatic cirrhosis.

**Materials and methods:** Multiphasic CT scans of 74 patients (24 healthy controls; 50 with liver cirrhosis, classified by Child-Pugh score) were retrospectively evaluated. Time-density curve of arterial, venous and late phases for each group of Child-Pugh score were calculated and compared between control and cirrhotic patients. In the experimental animal model with carbon tetrachloride induced cirrhosis, the CT findings and the histological features (optical and electron microscopy), were compared.

**Results:** Compared to healthy controls, the attenuation in the arterial phase in the cirrhotic patients was increased, whereas the enhancement in the portal phase was decreased. The late phase showed a different hepatic outflow between the two groups, with high values in cirrhotic patients if compared with control group. A significant relationship between portal attenuation value and Child-Pugh score was found. Moreover, the enhancement percentage in the arterial phase was increased in the cirrhotic patient, balancing partly the modified hepatic inflow.

CT findings were confirmed in the animal models, in which an altered hepatic perfusion, especially in the late phase, was detected. The fluorescent medium contrast delayed washout was related to the parenchymal injury. It was demonstrated by optical microscopy that showed high grade fibrosis and change of normal lobular structure and by electron microscopy showing modified hepatic perfusion.

**Conclusions:** The hepatic enhancement of portal and late phase detected at MDCT with multi-phasic scanning protocol is modified in cirrhosis. The MDCT could be a useful method of grading the disease. The MDCT findings were related with hepatic cirrhosis grading, as observed in animal models. The decreased flow in portal phase and the delayed wash out depends on the modified parenchymal structure of cirrhosis.

**A8 Early thrombolysis in an elderly patient: case report**
M Delle Curti, A Ciao, S Di Costanzo, B Lettieri
Department of Anaesthesia, Surgical and Emergency Science, Second University of Naples, Italy
E-mail: biagio.lettieri@unina2.it

**Background:** Pulmonary thromboembolism (TEP) is related to the migration of thrombotic material from the systemic venous circulation to

**Figure 1(abstract A8) Scintigraphy during the events.**

**Figure 2(abstract A8) Scintigraphy after the events.**

**Figure 3(abstract A8) Emogasanalysis during the events.**
pulmonary vascular tree, with obstruction of the pulmonary arterial circulation. The mortality rate is 30% in non-identifiable forms, and 2-8% in those treated earlier.

The early use of thrombolytics determines the success of the lysis. Thrombolysis is considered a proven treatment in the management of acute, massive forms of TEP that accompany a hemodynamic instability, but differences arise over time, the doses and which thrombolytic to use, to minimize the adverse events in compromised patients. Adverse events are: major bleeding, strokes, severe hypotension, allergies, re-thrombosis and re-perfusion syndrome.

Contraindications are: absolute (internal bleeding in progress, recent spontaneous intracranial hemorrhage) and relative (interventions Chir. <10 days, stroke <2m., Gastric bleeding <10 days, Major trauma <15 days, Recent CPR, PTL <100,000, poorly controlled severe hypertension, pregnancy).

Case report: Vincenzo R. 71 years-old, Kg110, is hospitalized for endoscopic pneumatic lithotripsy for an upper right ureter calculus. U.S. the lower limbs: thrombosis of the twin vein medial.

The maneuver, in general anesthesia, extends for 90’. At the awakening, after extubation occurs suddenly, dyspnea, pallor, precordial oppression. The ECG shows: FA with high ventricular response (160 bpm). There is also: PAs to 60mmHg, SpO2 (65%), moist rales at bases, cyanosis. The blood gas analysis performed on the patient is reported in Fig 1, chest X-rays show a sub-total haziness of both hemithorax by interstitial edema and alveolar perfusion and a scintigraphy performed at 5 hours from the event supports the clinical suspicion of high probability for TEP in place. D-dimer> 500μg / I confirmed the diagnosis. There are criteria for thrombolysis practice which lack the absolute and relative contraindications. After baseline control of coagulogramma we decide to give rtPA in less time than the traditional protocol (90’ vs 120’) with 40 mg iv bolus within 15’ with an additional 60 mg infusion in 250ml NaCl 0,9%for 80’. The fall of the PTL and FDP are considered tolerable, bleeding seems to be minimal. On the third day we look at weaning with good spontaneous respiratory activity.

Conclusions: The case report is characterized by the presence of the most frequent risk factors for TEP, DVT, obesity, and by clear indications for thrombolysis: severe hemodynamic instability, the absence of contraindication, early diagnosis and therapy (<8h). This allowed the procedure to obtain a good recovery accelerated thrombolysis and clinical scintigraphy without major bleeding complications.

References

A9 Sentinel node biopsy and radical lymph node dissection for advanced melanoma in the elderly

V Desiato, S Perrotta, Gl Benassai, G Quarto, G Benassai, G Limite
Dipartimento Universitario di Chirurgia Generale, Genitaria, Oncologica e Tecnologie Avanzate Facolta di Medicina e Chirurgia, Universita degli Studi di Napoli Federico II, Naples, Italy
E-mail: vin_des@hotmail.it

BMC Geriatrics 2011, 11(Suppl 1):A9

Background: The majority of indications for surgery in melanoma are for the treatment of primary tumor and lymph node metastases. During the last decade, the Sentinel Node Biopsy (SNB), from a research procedure, has become standard of care in most institutions. SNB is normally considered for patients with melanoma > 1 mm and generally about 20% are positive; however, the risk of a positive SNB in a melanoma < 1 mm is still 5%. Usually when SNB is positive a complete lymphadenectomy is performed.

Materials and methods: In the period 2004-2009, 18 elderly patients (median age 68 years) affected by cutaneous melanoma (mean Breslow’s thickness = 3.77 mm), after SNB histologically confirmed regional lymph node involvement, underwent complete lymph node dissection (CLND). We treated 11 of them with groin dissection, in 3 cases bilateral; 4 patients underwent axillary dissection, in one case bilateral; 2 patients underwent neck dissection and another patient underwent groin-axillary dissection. We treated bilateral groin involvement with laparoscopic access for dissection of lumbar-aortic, iliac and obturator lymph nodes.

Results: Disagreeing with literature, 12/18 (67%) of these patients had positive lymph nodes, a high percentage if compared with younger patients’ data. Currently the average follow-up is 25 months. In our sample CLND has a crucial prognostic role (16% vs 41% of deceased in CLND – and CLND + patients respectively).

Figure 4(abstract A8) emogasanalysis after three days.
Conclusions: Elderly melanoma patients are characterized by a higher tumor stage and, in patients with nodal metastases, the prognosis is independently affected by older age. In case of positive SNB the CLND plays a notable prognostic role and a presumable therapeutic role.

References

A10
Hemostatic devices in abdominal surgery
F Di Capua, M Petrocelli*, M M Salacco, A Vernillo, A Renda
Department of Surgical and Anesthesiological and Reanimative Sciences, University of Federico II, Naples, Italy
E-mail: m.petrocelli@hotmail.it
BMC Geriatrics 2011, 11(Suppl 1):A10

Background: Bleeding control is an important aim in surgery. A lot of haemostatic devices can be used to support hemostasis, so operative risks and length and hospital stay are reduced.

At General and Transplants Surgery Department of “Federico II” University of Naples, we evaluated the efficacy of haemostatic devices such as fibrin glues and collagen sponges in several surgical applications: kidney, gastroenteral, liver and pancreatic surgery.

Our aim is to find a specific use of each of the devices we used and to identify guidelines.

Materials and methods: From January 2010 and November 2010, we selected 30 patients older than 70 undergoing major surgery (16 cholecystomies, 4 gastrectomies, 4 liver resections, 4 nephrectomies, 2 pancreatic resections); during surgery we used biomaterials.

We examined: amount and nature of abdominal drains, haemocromo and ultrasound control of possible presence of intra-abdominal collections.

We made a retrospective analysis of 30 age-matched patients undergoing surgery from 2000 to 2005, without the use of haemostatic agents.

Results: We found a shorter operating time and a lower incidence of postoperative complications such as bleeding, lymphocele, biliomi and pancreatic fistulas, of about 15%. In addition, the incidence of complications due to the device itself was low: only one seroma and one case of granulomatous and fibrotic reaction.

Discussion: The experience of several authors in literature highlights the benefits of biomaterials haemostasis. The results of our experience are in line with those assessments.

Conclusions: Although you cannot disregard a careful surgical technique and classic methods, larger series and a longer follow-up are needed, the use of biomaterials can reduce the operative time and postoperative hospital stay presenting negligible complications and can therefore be considered a valid support.

References

A11
Pulmonary resection for NSCLC in octogenarians: a single center experience
S Di Russo, A Mani*, L Luetti, P Campese, G Cipollone, T Iarussi, F Mucilli
Department of Surgical Sciences – Unit of Surgical Clinic, University of Chieti “G. D’Annunzio”, Chieti, Italy
E-mail: aleksandermani@gmail.com
BMC Geriatrics 2011, 11(Suppl 1):A11

Background: Lung cancer is the second leading cancer death among octogenarians [1] and in particular NSCLC accounts for more than 90% of all lung cancers. Since life expectancy is improving, lung cancers are observed among octogenarians people more often. Surgical resection remains the treatment of choice for early stage lung cancer[6]. The authors report the outcomes of pulmonary resection for NSCLC in octogenarians.

Materials and methods: We reviewed our center experience in elderly patients between 1999 and 2009 and reported perioperative mortality and morbidity. Thirty patients older than 80 years underwent surgical resection for NSCLC. Among these 19 lobectomies, 1 sleeve-lobectomy, 2 bilobectomies, 6 segmentectomies and 2 wedge resections were performed.

Results: Post-operative non fatal complication occurred in 6 patients (20%): atrial fibrillation in 3 patients (10%), blood loss in 2 patients (6.6%), renal failure in 2 patients (6.6%), transitory cardiac arrhythmia in 1 patient (3%) and respiratory failure in 1 patient (3%). There was 1 post-operative death (3%).

Conclusions: The advances in preoperative and postoperative care and surgical technique allow a larger number of curative resections in octogenarians patients [2]. Therefore age is not an absolute contraindication for NSCLC surgical treatment but pre-operative study is mandatory. It highlights comorbidity that can badly influence the post-operative outcome and the survival.

References

A12
Influence of co-morbidity in the prognosis of polytrauma in geriatric patients
F Famà, L M Murabito*, A Beccaria, F Cucinotta, A Caruso, C D Poti, M A Godfrè Fiorino
Unità Operativa Complessa di Medicina e Chirurgia d’Accettazione e d’Urgenza con Osservazione Breve - Azienda Ospedaliera Universitaria “G. Martino” di Messina, Italy
E-mail: letimura@alice.it
BMC Geriatrics 2011, 11(Suppl 1):A12

Background: In geriatric patients co-morbidity, i.e. the presence of several diseases simultaneously, is frequent, and exerts a decisive influence on elderly patients’ heading progressively towards complete loss of autonomy and exposure to very high risk injury. In the case of trauma and even more of polytrauma, the high level of comorbidity and drug therapies in the elderly, influence the outcome and the approach of medical treatments, with important implications for both diagnostic and therapeutic plans. The increasing number of drugs (polypharmacy) required with increasing concomitant diseases (cardiovascular, neurological, musculoskeletal, etc.) stretch to influence the therapeutic response, with side effects that sometimes complicate multiple trauma, making therapeutic strategies particularly complex and difficult to manage.

Materials and methods: In the period January 2007 - October 2010 we recorded in our emergency department, an influx of geriatric patients (>65 years) amounting to 32501 (25.73%), amongst these 166 had multiple traumas (Fig.1). The clinical conditions in patients’ records, quickly identified with the color code (White-Green-Yellow-Red), are framed and evaluated in accordance with the Card of the Trauma Complex in use in our Complex Operative Unit of Emergency Medicine Surgery Acceptance with OB. The Probability of survival (Ps) is calculated by the method TRISS (Trauma and Injury Severity Score), or with the ISS (Injury Severity Score).

Results: During the considered period, we observed a constant number of cases of multiple trauma in geriatric patients, with a high number of females above the age group between 75 and 84 years. Over 60% of patients assessed by the ISS, had a score >15 (V-class seriousness of severe injuries) and just over 30%, a score <15 (class I to IV severity). All patients were hospitalized and we recorded only one death in intensive care 24h after trauma (Fig.2).

Conclusions: The patients with polytrauma, had often impairment of vital functions, so the presence of comorbidity in geriatric patients is a state...
that can increase the risk of mortality and permanent disability. The frailties of the geriatric patient due to the presence of comorbidity makes it more difficult to handle and manage them in emergency conditions. Medical treatment is aimed at managing comorbidities. It is of note that, in our experience, the only death in polytrauma in 24 hours, from 2007 to 2010, was recorded in a geriatric patient.

References

A13 Polytrauma in geriatric patients: incidence and mortality
F Famà, L M Murabito*, A Beccaria, F Cucinotta, A Caruso, C D Foti, G Versace, N La Torre, C Estolatore, P Placanica, M A Gioffrè Florio
Unità Operativa Complessa di Medicina e Chirurgia d’Accettazione e d’Urgenza con Osservazione Breve - Azienda Ospedaliera Universitaria “G.Martino” di Messina, Italy
E-mail: letimura@alice.it

Background: The increase of traumatic events involving geriatric patients is due to longer life expectancy and a progressive improvement of quality of life. More and more elderly subjects carry out various activities, however because of physical frailty, activity exposes them to the risk of injuries and accidents. They are more susceptible to traumatic injuries of road traffic accidents. Our objective was to analyze how increased age and the presence of several related diseases have contributed to an increase in the incidence of multiple trauma in the last 3 years.

Materials and methods: In the period January 2007 - October 2010, in our UOC MCAU with OB, adequately equipped for major trauma with a Trauma area and RED area with two Shock Rooms, 126304 total referrals were recorded. The percentage of geriatric patients (≥65 years) was 25.73% (N=32501), amongst these 3067 (2.42% of total referrals) had medium-severe injuries from domestic or road traffic accidents (Fig.1).

Results: We observed that the incidence of geriatric trauma has remained constant every year, with a majority of females over males (F/1981-M/1086) (Fig.2) and that the age group most affected is between 75 and 84 years.

Injuried patients recorded in our Emergency Department from 2007 to 2010.
The 3067 patients we observed: head trauma was present in 1297 patients (42.3%), head and/or facial trauma 293 (9.6%), followed by thoracic trauma 242 (7.9%) and/or abdominal trauma 37 (12 %), often associated with single or multiple fractures (Fig.3).

The most recurrent fracture was the fracture of the femur 513 (16.72%), especially in women (possibly secondary to osteoporosis). Also numerous were fractures of the upper limbs (N=474) and rib fractures (N=333). In 40% of cases (1227) the trauma was related to a syncpe event. 1981 patients required hospitalization, predominantly in Orthopaedics and Traumatology (N=592), in neurological wards (N=170), in Thoracic Surgery (N=107) and 235 in other departments. In the Emergency Department (UOC MCAU with OB), no death for geriatric trauma was observed.

Conclusions: The most frequent traumatic event is represented by falls, often associated with syncopal events, very frequent syndrome in geriatrics. In road traffic trauma, the geriatric patient is more often a pedestrian, therefore, the risk of back injuries and fractures is significantly higher, and the risk of permanent disability or death is high.

References


Background: Comparing outcomes of the first Division of Abdominal Surgery of the Saint Louis Hospital of Orbassano (Turin) with the literature, regarding timing and technique of early or delayed laparoscopic cholecystectomy in the management of acute cholecystitis in elderly patients.

Materials and methods: From January 2005 to December 2009 114 laparoscopic cholecystectomy in the elderly were performed in our surgical division: 67 for gallbladder stones and 47 for acute cholecystitis. The diagnosis of cholecystitis and gallbladder stones was based on general condition, physical examination, laboratory, radiological findings and sepsis score. For the study we’ve also considered: total hospital stay, timing after and before the operation, kind and duration of operation, conversion to the open procedure, drain and final pathological results. From this study 29 patients were excluded (17 for cholecocolytiysis associated and 12 for hospitalisation > 20 days). We hadn’t excluded patients ASA III and ASA IV: in these patients (27.4 %, 17 ASA III and 4 ASA IV) abdominal pressure not superior of 10 mmHg was used [1].

Elderly patients included in the study were 85 (49 M, 36 F). Ordinary Cholecystectomy were performed in 45 cases and Emergency Cholecystectomy in 40 cases. This last group was further divided into two groups [2-4]: DEA Early, E-DLC, (31 patients operated on within 72 hours from onset of symptoms) and DEA Delayed, D-DLC, (9 patients operated on after 72 hours to 9 days from onset of symptoms).

We’ve also considered the operating team (Table 1) that performed the operation because the first operator’s experience was considered as an important factor in order to evaluate our results [5-11].

Results: The comparison between elective and emergency operations showed that drain placement and post operation hospital stay were found statistically significant in the emergency group (Table 2). There weren’t any differences regarding team evaluation (Table 3). Concerning the analysis of the E-DLC and D-DLC groups there aren’t any statistical differences (Table 4).

Conclusions: In contrast with other authors [12,13], laparoscopic cholecystectomy in our elderly patients, when performed with an adequate technique, represents a safe procedure to treat all cases of acute

Table 1(abstract A14) Definitions of equipes

<table>
<thead>
<tr>
<th>Team</th>
<th>Description</th>
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<tbody>
<tr>
<td>Team 1</td>
<td>More than 100 laparoscopic cholecystectomy and more than 100 other laparoscopic operations.</td>
</tr>
<tr>
<td>Team 2</td>
<td>Less than 100 laparoscopic cholecystectomy and less than 100 other laparoscopic operations.</td>
</tr>
<tr>
<td>Team 3</td>
<td>Surgeons in learning curve progression or Resident with expert Surgeon supervisor</td>
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Table 2(abstract A14) Ord/DEA

<table>
<thead>
<tr>
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<th>DC</th>
<th>P Value</th>
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<td>75.5 (40-220)</td>
<td>90 (28-200)</td>
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</tr>
<tr>
<td>PO hospital stay (days)</td>
<td>2 (1-10)</td>
<td>3 (2-12)</td>
<td>0.002313</td>
</tr>
<tr>
<td>Conversion rate</td>
<td>6.7%</td>
<td>2%</td>
<td>0.3869</td>
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<tr>
<td>Complications</td>
<td>8.5%</td>
<td>2%</td>
<td>0.2352</td>
</tr>
<tr>
<td>Drains</td>
<td>16.7%</td>
<td>51%</td>
<td>0.0003</td>
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<tr>
<td>Associated operations</td>
<td>13.3%</td>
<td>12.8%</td>
<td>0.998</td>
</tr>
<tr>
<td>Cancer</td>
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<td>0</td>
<td>-</td>
</tr>
</tbody>
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Table 3(abstract A14) Equipes

<table>
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<th>E1-E3</th>
<th>E2-E3</th>
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</thead>
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<td>PO hospital stay (days)</td>
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<td>0.09583</td>
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<td>Total hospital stay</td>
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<td>0.004981</td>
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<td>Conversion rate</td>
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<tr>
<td>Complications</td>
<td>0.3823</td>
<td>0.998</td>
<td>0.098</td>
</tr>
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</table>
Table 4 E-DLC/D-LC

<table>
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<th>Parameter</th>
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<th>DLC</th>
<th>P Value</th>
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</thead>
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<td>9.05 (22.3-15.6)</td>
<td>0.03264</td>
</tr>
<tr>
<td>PCR</td>
<td>1.39 (004-45)</td>
<td>0.66 (028-23.23)</td>
<td>0.1672</td>
</tr>
<tr>
<td>Temperature</td>
<td>14%</td>
<td>2% (7%)</td>
<td>0.5281</td>
</tr>
<tr>
<td>Thickened wall</td>
<td>57.4%</td>
<td>13 (49%)</td>
<td>0.4</td>
</tr>
<tr>
<td>Pericholecystic fluid</td>
<td>17%</td>
<td>2 (7.4%)</td>
<td>0.25</td>
</tr>
<tr>
<td>Distended gallbladder</td>
<td>43.4%</td>
<td>12 (44.4%)</td>
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<td>Operation time (min)</td>
<td>90 (36-330)</td>
<td>85 (28-195)</td>
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</tr>
<tr>
<td>PO hospital stay (days)</td>
<td>3 (2-15)</td>
<td>3 (2-8)</td>
<td>0.6551</td>
</tr>
<tr>
<td>Total hospital stay</td>
<td>4 (2-16)</td>
<td>10 (4-16)</td>
<td>p&lt;0.01</td>
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<tr>
<td>Tasso di conversion</td>
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<td>0%</td>
<td>0.59</td>
</tr>
<tr>
<td>Complications</td>
<td>5%</td>
<td>0%</td>
<td>0.59</td>
</tr>
<tr>
<td>Drains</td>
<td>36%</td>
<td>26%</td>
<td>0.3752</td>
</tr>
<tr>
<td>Operations associated</td>
<td>8%</td>
<td>15%</td>
<td>0.2393</td>
</tr>
<tr>
<td>Cancer</td>
<td>1.6%</td>
<td>0%</td>
<td>0.998</td>
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</table>

cholecystitis in an emergency setting [14-22]. Our technique represents a standardized surgical strategy to approach acute cholecystitis and cholelithiasis in the elderly in a safe, effective and reproducible manner.

References


A15 Wound defects in the elderly: our experience

A Ferrarese , V Martino, M Nano
Department of Clinical and Biologic Science, School of Medicine and Surgery “S. Luigi Gonzaga” - AOU San Luigi Gonzaga – Orbassano, Turin - SCDU General Surgery University of Turin, Italy
E-mail: alessia.ferrarese@gmail.com

BMC Geriatrics 2011, 11(Suppl 1):A15

Background: We report our experience on clinical outcomes of elderly patients who have undergone laparoscopic repair for incisional and primary inguinal hernias.

Patients and methods: To assess the safety and efficacy of laparoscopic [1-5] primary inguinal and incisional repair we reviewed the records of our patients of over 70 years old, who underwent such a procedure from June 2007 to September 2010: hernia defect size, recurrence, operative time, and procedure-related complications [6] were evaluated and a laparoscopic approach was attempted in all patients who required a mesh repair.

We scheduled 42 patients (32 M - 10 F, with 53 wound defects totally) for laparoscopic incisional [7] and primary inguinal hernia repair and we performed 17 surgical repair for incisional hernia and 36 for primary hernia. Of those, 13 were done for incisional hernias with a single defect (24.5% recurrence hernias), 4 with multiple defects (7.5% recurrence hernias), 12 were performed for unilateral inguinal hernias (22.5% recurrence hernias), 16 for bilateral inguinal hernias (30.08 % recurrence hernias), 4 for umbilical hernias (1 recurrence hernias), 2 for epigastric and linea alba’s hernias, and 2 for rectum diastasis.

The majority of the patients were normal weight with a mean BMI of 25 kg/m2 (45%), 38% > BMI > 30 (overweight), 17% BMI > 30 (obesity). There was no conversion to an open procedure. The mean operative time was 128 minutes (range: 50 – 325).

In all the patients only mesh was used (37.5% polypropylene not reabsorbable, 42.5% tridimensional polyester-collagen composite mesh, 20% lightweight multifilament mesh partly reabsorbable) [8]. The meshes were fixed in 82.5 % with absorbable fixation device, in 5% with a non-absorbable device and in 12.5 % with fibrin glue [9]. In contrast to other authors [10-13], major complications were 14.24% (6/42: 2 chronic inguinal pain, 4 recurrences). Minor complications were 5/42 (11.90%) and included only asymptomatic seromas that were aspirated. The mean hospital stay was 4.7 days (range: 1-18 days).

Conclusions: Laparoscopic repair of primary inguinal and incisional ventral hernias with transabdominal placement of composite mesh in the elderly achieves excellent results with low morbidity in comparison with open surgical approaches [2,3]. In our experience, adequate fixation of the mesh, extension to cover the entire previous incision and standardization of the placement interval of the sutures are crucial to the success of the repair.

http://www.biomedcentral.com/1471-2318/11/S1#issue=S1
Laparoscopic repair of abdominal wall hernia. We suggest that the endovascular technique is a valid approach.

Long-term care for the frail elderly. For many years some demographic changes have been taking place that means also a constant growth of the elderly population. These changes cause an increase of degenerative diseases, often associated and affected by functional limitations and/or disabilities [1]. That has lead to an increasing demand for long term social and medical services with a subsequent rise in sanitary aids consumption. The traditional model of care offering specialist and episodic treatments, appears to be no longer suitable to guarantee the best results regarding a good quality of life and abilities [2].

Background: For many years some demographic changes have been taking place that means also a constant growth of the elderly population. These changes cause an increase of "frail" patients, affected by chronic and degenerative diseases, often associated and affected by functional limitations and/or disabilities [1]. That has lead to an increasing demand for long term social and medical services with a subsequent rise in sanitary aids consumption. The traditional model of care offering specialist and episodic treatments, appears to be no longer suitable to guarantee the best results regarding a good quality of life and abilities [2].

Methods: We present a case of a 75-year-old patient with acute occlusive mesenteric ischemia (AMI) that was successfully treated with endovascular intervention. Angiography revealed high-grade stenosis of the proximal tract of the SMA. Immediate option for endovascular therapy was made, and a MARIS self-expandable 6x40 mm stent was positioned. The patient was discharged 2 days after with full recovery from the symptoms.

Conclusions: We suggest that the endovascular technique is a valid option in patients with AMI preventing intestinal infarction.
Background: It is a common clinical opinion that there is a mismatch between clinics and the morphological findings of mesenteric vascular district stenosis, anyway, very little experimental evidence exists relating to chronic intestinal ischemic pathology in the elderly and, in particular, it is not clear if there is a clinical picture emerging of ischemic pathology in the elderly.

The aim of the study is to evaluate the clinical and biohumoral presentation of the elderly with mesenteric vessels stenosis.

Materials and methods: Patients over 64 years old that have undergone radiological examination of splanchnic vessels by AngioTC in the Azienda Ospedaliera of Padua and ULSS 16 between 2008 -2010 were included in this study. Patients who could not not be interviewed or whose medical history could not be reconstructed through the hospital’s archives, affected by primary renal failure, cirrhosis or neoplastic disease diagnosed within the last 5 years, who underwent splanchnic angioplasty or intestinal resection, were excluded from the study. Patients with a clinical presentation of acute intestinal ischemia, were also excluded. These patients were then examined by the degree of vascular involvement to define two major groups: patients without vascular alterations or with monovascular involvement, and patients with multivascular involvement.

Results: Ninety-nine patients were studied 36 males and 63 females, with an average age of 76 years old, range 64-92. Between them 19 had, on examination, a multivascular alteration. The other 80 patients presented at the morphologic study a complete patency of mesenteric vessels, or a monovascular involvement. There were no significant differences between comorbidity and abdominal symptomatology, but there was a significant difference of age: the multivascular group was composed of older people (average age 78 years old), admissions and duration of hospitalization where higher and, from the hematohemich point of view, the multivascular group presented lower hemoglobin, MCV and albumin. Finally, in the group with multivascular alterations, the BMI was significantly lower and the use of benzodiazepines was higher than in the other group.

Conclusions: From our data it emerges that elderly patients with vascular splanchnic alteration are subjected to major and longer hospitalizations, undergoing non specific treatment such as sedatives with benzodiazepines.

This evidence, over and above characterizing a correspondence between seriousness of vascular damage and clinical course, could lead to the conclusion that vascular splanchnic alteration in the elderly is a not a broadly studied pathology and so is not completely managed within up-to-date experimental evidence.

A19
Effects of nutritional supplements in healing of laparotomic dehiscences in obese patients with metabolic syndrome: a randomized prospective controlled study
M Galeotalanza1, S Spezza1, M Santangelo2
1Department of Neuroscience, Physiology Nutrition Unit, University Federico II, Naples, Italy; 2General, Thoracic and Vascular Surgery Department, O.U. of General Surgery and Organ Transplantation, University of Naples “Federico II”, Naples, Italy
E-mail: sergiospezia@libero.it
BMC Geriatrics 2011, 11(Suppl 1):A19

Background: Chronic venous insufficiency, infection, diabetes mellitus, excess malnutrition, exposure to pressure and shear, all conditions included in obesity, prolong the healing process. Moreover, a growing body of evidence clearly indicates that dietary supplementation or intravenous administration of Arg is beneficial in facilitating wound healing, enhancing insulin sensitivity, and maintaining tissue integrity. Arginine produces physiologic effects via nitric oxide dependent and independent pathways. Nitric oxide is important for the modulation of vascular tone, inflammation, immune function, endothelial function, platelet and leukocyte adherence, and neurotransmission. Nitric oxide modulates many biochemical processes important for the response to sepsis. Arginine, independent of nitric oxide, is important for growth, wound healing, cardiovascular function, immune function, inflammatory responses, energy metabolism, urea cycle function, and other metabolic processes. Arginine supplementation improves outcomes in animals with sepsis, wounds, ischemia-reperfusion injury, and following thermal injury. Enteral administration of arginine improves endothelial function but has little effect upon hemodynamics during human sepsis. An analysis of

Figure 1(abstract A17) A) Preoperative angiography. B) Angiography with stent apposition.
clinical studies using enteral formulas with supplemental arginine suggests benefits upon outcome, with no evidence of significant detrimental effects. The aim of this study was to evaluate the healing effects of a nonmolaric diet enriched in arginine, eicosapentaenoic acid (EPA) and gamma-linolenic acid (GLA) and vitamins (vitamins A, C and E) on laparotomies wound dehiscence.

Materials and methods: Thirty obese (BMI > 35 kg/m²) patients with acute wound infections were included in a study evaluating the effects of protein, lipids and vitamins on healing of wound dehiscence. A diet enriched with nutritional supplements of arginine, EPA (EPA, GLA) and vitamins (vitamins A, C and E) was compared with a diet not enriched. The incidence of wound dehiscence was evaluated weekly. Nutritional assessment included levels of serum albumin, C-reactive protein.

Results: Patient’s age, severity of disease and gender distribution were similar in the two groups. The study group had a higher body mass index. At baseline, the wound dehiscences were similar in the two groups. A significant reduction of healing time of existing wounds was observed in the study group compared to the control group (p<0.05). There was no significant difference in the nutritional parameters between the two groups.

Conclusions: A diet enriched with arginine, EPA, GLA and vitamins A, C and E is associated with a significantly lower healing time of wound dehiscences in critically obese patients.

References:

A20

Spigelian hernia in the elderly
R M Giammattei, L Butuc, F La Rocca, G Viola, A Mercogliano, G Fatigati, A Martin
Dipartimento di Chirurgia Generale e Specialistica, Casa di cura Andrea Grimaldi – San Giorgio a Cremano, Italy
E-mail: rosagiammattei@libero.it

BMC Geriatrics 2011, 11(Suppl 1):A20

The Spigelian hernia or lateral ventral hernia is a rare clinical entity, characterized by a defect in the Seminular line. The etiology is mainly based on the anatomical features of the Spigelian aponoeurosis and all those conditions that lead to increased intra-abdominal pressure (COPD, obesity, chronic constipation), typical in the elderly. In our study, we report two cases of Spigelian hernia which appear in two patients, a 75-year-old female and a 71-year-old male, both had associated comorbidities. The female patient, suffering from hypertension and a history of diverticular disease which presents a strangulated hernia of the left abdominal wall, so, in the presence of intestinal sub-occlusion santomatology, required emergency treatment. The second patient, suffering from hypertension, kidney stones and benign prostatic hyperplasia, reported abduminal discomfort with intense swelling predominantly on the left side of his abdomen examination. The second patient did not present complication and elective treatment was performed. The surgical technique adopted in both cases was the placement of hernioplastic with polypropylene mesh, a technique that allows a short hospital stay and early rehabilitation for the patient.

A21

Original method in the treatment of varicose veins of the lower limbs in elderly patients candidates for orthopedic surgery
L Goffredi1, PF Atelli2, M Appenti2, MD Della Rocca1, S Appenti2
1Pathophysiology and Therapy of venous diseases, Department of Anesthetic, Surgical and Emergency Sciences, Inter-University Centre for research and training in Phlebology, II University of Naples, Italy,
2Collaboration in the development of the equipment Visioven*
E-mail: patelli@alice.it

BMC Geriatrics 2011, 11(Suppl 1):A21

Background: The increase in lower limb orthopedic surgery in the elderly patients often leaves the vascular surgeon faced with a growing demand for treatment of varicose veins of the lower limbs, in order to reduce the risk of post-operative thromboembolic. The laser treatment allows us to reach the goal with the advantage of reduced invasiveness and reduced recovery times, greatly facilitating subsequent orthopedic therapy. Materials and methods: We have used this method of treatment since 2006 on about 40 geriatric patients with varicose veins and lower limb orthopedic surgery candidates. A laser with probe 600 µm. and a light source tested and patented by us (Visioven*) was used on all patients.

Results: No patient had post-operative complications and during the follow-up no patient showed signs of recanalization of the treated vases. The period of time between the intervention of laser photoacogulation and the following orthopedic intervention was in average of 15 days.

Conclusions: The treatment of varicose veins of the legs with EVLT (EndoVenous Laser Therapy) is by now a method of a great success. In this context, the Visioven* has proven extremely useful, since the laser light can cross better than other light sources, to ensure the treatment of varicose veins under direct vision. Our method allows the insertion of the probe, either directly through a thin needle, thus avoiding having to perform a number of skin incisions and removing the risk of thermal injury due to exposure to incongruous laser energy outside the venous lumen.

In conclusion, the laser photoacogulation treatment under direct vision through Visioven* is in our view an effective method, targeted and rapid
treatment of varicose veins of the lower limbs in geriatric patients who are candidates for orthopedic surgery [1,2].

References

A22
Cystic lymphangioma of hepato-gastric ligament: a rare case of neoplasia in adults
L Grimaldi1, S Reggio2
1 Centro di Riferimento Regionale Tumori Rari (C.R.T.R.) – A.O.U. “Federico II” Naples, Italy; 2 Assistente in Formazione in Chirurgia Generale, A.O.U. “Federico II” Naples, Italy. E-mail: luca.grimaldi@alice.it

BMC Geriatrics 2011, 11(Suppl 1):A22

Background: The cystic lymphangiomas (LC) are polymorphous tumors of undecided origin, [1], observed mainly in children and more often localized in the cervical and axillary areas. [2] We report the case of an adult who suffers from cystic lymphangioma of the peritoneum already with a history of surgery for the same type of cancer of the left cheek.

Materials and methods: FE, a man of 71 years, comes to our attention in July 2009 complaining about one month from the onset of dyspeptic disorders and a sense of weight reported in epigastrium. In his history, in addition to this, the patient reported the removal of a cystic lymphangioma in the left cheek a few years before. On physical examination, in the right hypochondriac region, there is the presence of swelling of tense-elastic consistency, mobile on superficial and deep plans and painless, about 10 cm in maximum diameter. Ultrasound, CT and MRI documented the presence of an oval formation, with cystic characteristics 144x68 mm in diameter that extends caudally to about 10 mm in the context of the peritoneum in close proximity with the front lower edge of the small wing of the liver and the gastric body. The patient underwent exploratory laparotomy, where we found a massive lesion, well encapsulated, of elastic consistency, brown stalk, originating from the hepato-gastric ligament and we proceed with the removal of the mass “en bloc” after ligation of the vascular pedicle. No additional excision was necessary. The histological examination demonstrated a cystic lymphangioma. The post-operative course was regular, the patient was discharged on the third day. After six months of follow up the patient is disease free.

Results: The cystic lymphangioma is a rare, hamartomatous tumor whose etiopathogenesis seems secondary to a congenital malformation of the lymphatic system [3,4]. The most common site is in the superficial subcutaneous tissue in the neck, cheeks and supraclavicular region, and is rarely found at a deep level in the axillary region, mediastinal or abdominal [5]. In relation to the rarity, the diagnosis of LC may be a suspicion and arises after excluding other diseases with similar findings [6,7]. The complete surgical excision is the treatment of choice. The use of sclerosing injections may be indicated in inoperable lymphangiomas [8]. The complete resection is without risk of recidivism, this possibility increases with incomplete removal, 10-15% with a tendency to invasive growth [9,10].

Conclusions: The LC is a rare disease in adults; the authors describe the case of a person 71 years of age with a cystic lymphangioma of the peritoneum of the lesser omentum. Ultrasound, CT and magnetic resonance imaging for evaluating the characteristics and location of the tumor. The surgical excision is the treatment of choice, allowing a histological diagnosis.

References

A23
No colorectal cancer in the elderly: prognostic role of advanced age and correlation with adjuvant chemotherapy
M Gruppo1, G Piatto1, F Mazzalai2, R Lorenzetti1, M Di Giunta1, C Terranova2, A Brutoacoc1, C Milletello1
1 Clinic of General Surgery, University Hospital of Padua, Italy; 2 Unit of Forensic Toxicology and Antidoping, Hospital University of Padua, Italy. E-mail: mariopietro@libero.it
BMC Geriatrics 2011, 11(Suppl 1):A23

Background: The aim of this study is to assess the possible prognostic role of age in the risk of relapse in patients operated for N0 colorectal cancer and if this role is confirmed in a control population who underwent adjuvant chemotherapy.

Materials and methods: 129 patients who underwent radical surgery for N0 colorectal cancer were selected and grouped into three age classes: <65 years, between 65 and 80, >80. A subgroup of 44 patients with colorectal cancer in stage II was selected from the initial group for a comparison with a control population consisting of 63 patients who underwent radical surgery and adjuvant chemotherapy for neoplasms at the same stage.

Results: In the population of 129 patients, the only significant correlation between age and clinical-pathological features is between advanced age (>80yr) and tumor location in the right colon (53.7%, p=0.04). Risk of relapse is related both to depth of tumor invasion (42.9% in stage T4, 6.3% in stage T1, p=0.01) and advanced age (19.5% in >80yr, 4% in <65yr).

Overall survival (OS) and disease free survival (DFS) are significantly lower in patients aged over 80 than the other two classes. This significance is maintained by stratifying the 129 patients in the two age classes (<70, >70).

In the multivariate analysis age >80yr is significantly correlated with an increased risk of relapse.

Evaluating the control group no significant correlation between relapse and clinical-pathological features was detected.

In the multivariate analysis in stage II population, advanced age doesn't play any significant prognostic role in the risk of recurrence, while a reduction in DFS is related to depth of tumor invasion and the number of examined lymph nodes (<12).

Conclusions: The negative prognostic role of advanced age in the risk of relapse that emerges from the first part of the study is certainly related to the increased fragility of elderly patients, which might be caused by several pathophysiological factors hypothesized by several Authors, but does not appear to be a controindication for surgery.

The comparison between only-operated patients and control ones in stage II neoplasm doesn't show a prognostic role for advanced age in the risk of relapse.

This could be attributed to several factors, first of all the lack of subjects enrolled in the study, because of the controversial role of age in stage II candidates for adjuvant chemotherapy. However we cannot exclude that adjuvant chemotherapy could affect the role of age as a prognostic factor.
A24
Is total colectomy for colorectal cancer contraindicated in elderly patients?
S Grassia, C La Tessa*, S Spiezia, R Romagnuolo, N Carlomagno, C Dodaro, A Renda
Surgical, Anaesthesiology-Rianimative and Emergency Science Department, University of Naples "Federico II", Italy
E-mail: cristinalatea@gmail.com
BMC Geriatrics 2011, 11(Suppl 1):A24

Background: More and more frequently elderly patients are operated on for colorectal cancer (CRC). Total colectomy is indicated in selected cases such as synchronous tumors, cancer in FAP, HNPPC, emergency. We evaluated the impact of the age risk factor on patients’ outcome after total colectomy for cancer.

Methods: We reviewed our series concerning 27 patients submitted to total colectomy for CRC between January 2000 and September 2010. Indications were: synchronous tumors, cancer in FAP, HNPPC, and emergency. We divided them into two groups according to their age: 11 (40.7%) < 65 years (Group A) and 16 (59.3%) ≥ 65 years (Group B). For both groups the following preoperative parameters were investigated: emergency/elective surgery, comorbidity, smoke abuse, ASA score, and surgical operation. Postoperative course related to systemic (pulmonary, cardiac, renal and liver failure, pulmonary embolism, urinary tract infections) and specific surgical complications (anastomotic dehiscence, hemorrhage, postoperative anemia, wound infection, prolonged ileus >3 days) were compared in two groups.

Results: Comorbidity was higher in older patients. We found a different distribution of ASA scores in the two groups: in the first group 5 (45.5%) patients had score ≤ 2, while 6 (54.5%) patients presented score ≥ 3; in the second group 10 (62.5%) patients presented score ≥ 3, while 6 (37.5%) patients had score ≤ 2. We performed 2 (7.4%) total protocolectomy and permanent ileostomy; 1 (3.3%) restorative proctocolectomy with ileal pouch-anal anastomosis (IPAA); 24 (88.9%) total colectomy and ileo-rectal anastomosis (IRA). We observed 1 hemorrhage in a patient belonging to group A with ASA score 2. Systemic complications were higher in group B. We did not observe significant differences for surgical complications but for postoperative anemia (more frequent in group B). Average hospital stay was similar (11.2 days vs 12.8 days). Mortality (2/27 (7.4%), in group B (2/16-12.5%)) was not statistically significant.

Conclusions: After total colectomy for CRC we observed slightly higher postoperative morbidity and mortality in elderly patients. However our morbidity, mostly due to systemic complications, was acceptable and depended on a greater presence of preoperative risk factors. In conclusion we believe that, after an accurate preoperative evaluation, the age is not a contraindication for total colectomy.

References

A25
Optimization of long-term graft survival after liver transplantation: the role of donor age
Q Lai, F Melandrò, G Spoletini, GB Levi Sandri, N Guglielmo, S Ginanni Contadi, PB Berloco, M Rossi
Department of General Surgery and Organ Transplantation, Sapienza University, Rome, Italy
E-mail: lai.quirino@libero.it
BMC Geriatrics 2011, 11(Suppl 1):A25

Background: Nowadays, several solutions have been proposed for the minimization of both organ shortage and prolonged waiting times: the expansion of the donor pool using aged donors represents a possible solution [1]. However, it is not completely clear if the use of "extreme" donors could cause unacceptable post-transplant adjunctive risks [2]. Starting from these grounds, the aim of this study is to evaluate the impact of donor age on long-term graft survival.

Materials and methods: From January 2001 to April 2009, 188 consecutive liver transplantations were performed at our Department. The entire cohort was stratified in 4 subgroups according to donor age: Group 1 (1st-2nd decade, n=34), Group 2 (3rd-4th decade, n=51), Group 3 (5th-6th decade, n=75) and Group 4 (7th-8th decade, n=28). Donor, recipient and transplantation characteristics were compared in the 4 groups. ANOVA test and Kruskal-Wallis test were used for the comparison of continuous and categorical variables. Kaplan-Meier test was adopted for survival analysis: log-rank test was used for comparison among the groups’ survival rates.

Results: As expected, donor age, percentage of cerebrovascular deaths, BMI and DRI resulted higher in the last group. The male gender was prevalent in the 1st Group, while macrovesicular steatosis resulted higher in the 3rd Group. Recipient and immediate post-transplant features resulted homogeneous among the groups. At survival analysis, 5-year graft survival rates were progressively worsened among the groups (82.4% vs 73.3 vs 64.7% vs 39.6%, respectively). At log-rank analysis, statistical significance was observed between the first 2 Groups and 4th one (p-value 0.003 and 0.006, respectively), while a boundary statistical significance was observed between the 1st and 3rd Group. Figure 1.

Conclusions: In our experience, use of < 70 year-aged donors seems to be safe, while very aged (over 70) donors give poor long-term survival rates, despite similar initial post-transplantation results. We could speculate that grafts procured by very aged donors could be easier targets of viral recurrence, late ischemia-reperfusion damage and chronic rejection. A better allocation system for these organs may be improved, preferring HCC recipients who exceed transplant criteria to HCV ones [3].

References
**A26**

Quid novi in the elderly patient’s anesthesia

B Lettieri, ML Mingione, A d’Elia, P Capodanno
Department of Anaesthesia, Surgical and Emergency Science, Second University of Naples, Italy
E-mail: biagio.lettieri@unina2.it

**BMC Geriatrics** 2011, 11(Suppl 1):A26

**Background:** Today the availability of new local anesthetics and the use of analgesics, allow the modulation of the analgesia, maintaining a state of consciousness. An answer to the needs of patients > 75 years undergoing surgery is the technique Monitored Anesthesia Care (MAC), defined “the middle land” (Figure 1).

MAC allows:
- the modulation of the level of analgesia at different stages of surgery due to the availability of analgesic action, but with rapid onset-time
- the additional analgesia using local anesthetics with prolonged effect without the use of noradrenaline, dangerous for elderly patients the consciousness and cooperation of the patient (Table 1).

**Materials and methods:** With this study we tested the efficacy, safety and limitations of the MAC.

The design of the study was a prospective, double-blind, parallel-group, with 42 patients randomly selected from 87 patients recruited between those eligible for inclusion in the circuit one-day surgery (Table 2).

Two groups were subjected to two different regimes of sedation with propofol and midazolam, pain controlled with remifentanil.
- Primary end-point was verifying the level and quality of sedation achieved
- Secondary end-point was identifying and quantifying potential adverse effects (Table 3-4)

Levels of sedation, pain and mental status were assessed using different clinical approaches:
- Observational data (Table 5).

We proceeded as follows:
1) O₂ inhalation (SpO₂ > 98 and normocapnia)
2) during surgical manipulation a continuous infusion of remifentanil: 0.03 to 0.06 mg / kg / h was activated

Patients were randomly dichotomized into two arms with two different infusion regimens:
- group P (45 patients): starter bolus of 0.5 mg / kg propofol (to fill the central compartment) → P infusion of 1-2 mg / kg / h (to offset the rapid deployment)
- group M (41 patients): bolus starter from 0.03 to 0.05 mg / kg midazolam (average dose of 2-4 mg) infusion of 1-2 mg / kg / h

Every 10 m’ scores are recorded, BIS and OAA / S scale.

- Objective parameters based on Ramsay Scale (Table 6).
- Instrumental response with Bispectral Index (Table 7, 8, 9)

**Conclusions**

The combination midazolam-remifentanil presented a lower synergistic effect compared with propofol-remifentanil. The first fact documented a mean BIS of 62.5 ± 3 vs. 64.7 ± 4 midazolam-remifentanil association and has finally, although sporadic, incidents of desaturation content and never > 30%. The evaluation of the kinetic values of BIS, the interesting fact that emerges concerns the values> 70, which represented a

---

**Table 1(abstract A26) MAC**

<table>
<thead>
<tr>
<th>Conscious Sedation(MAC)</th>
<th>Unconscious Sedation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altered consciousness</td>
<td>Unconsciousness</td>
</tr>
<tr>
<td>Conscious patient</td>
<td>Unconscious patient</td>
</tr>
<tr>
<td>Protective reflexes intact and active</td>
<td>Protective reflexes decreased, airway obstruction may occur</td>
</tr>
<tr>
<td>Ventilation: hypoxia, hypercapnia Cardiovascular system: hypotension, hypertension, bradycardia, tachycardia</td>
<td></td>
</tr>
<tr>
<td>Stable vital signs</td>
<td>Pain controlled centrally; does not require regional analgesia</td>
</tr>
<tr>
<td>Analgesia may be present; need for regional analgesia / local or systemic</td>
<td></td>
</tr>
<tr>
<td>Limited stay in the units of observation</td>
<td></td>
</tr>
<tr>
<td>Low risk of complications</td>
<td></td>
</tr>
<tr>
<td>Infrequent postoperative complications</td>
<td></td>
</tr>
<tr>
<td>Patients with psychiatric problems or mental deficiency may be difficult to manage</td>
<td></td>
</tr>
</tbody>
</table>

**Table 2(abstract A26) Patients’ criteria of homogeneity**

<table>
<thead>
<tr>
<th>Patients’ criteria of homogeneity</th>
</tr>
</thead>
<tbody>
<tr>
<td>same level of gravity ASA II/III</td>
</tr>
<tr>
<td>NYHA II class</td>
</tr>
<tr>
<td>same duration of surgery (40 min ± 10 min)</td>
</tr>
</tbody>
</table>

**Table 3(abstract A26) Access Criteria**

**ACCESS CRITERIA**

Weight 69 ± 6 Kg

Informed consent for MAC procedures

ASA II/III with stabilized cardio-circulatory impairments and respiratory parameters: pO₂ ≥ 70 e pCO₂ < 45 mmHg

Patients undergoing operations can be managed only with the cooperation of the patient

Age > 75 years

**Table 4(abstract A26) Exclusion Criteria**

**EXCLUSION CRITERIA**

Patient desire

ASA III impairment of vital organs in acute and evolutionary phase

Patients with unexpected rapid intubation

Patients with high risk of bleeding

Severe neurological disorders

**Table 5(abstract A26) Observer’s assessment of alertness/sedation scale (oaa/s scale)**

<table>
<thead>
<tr>
<th>Answer</th>
<th>Verbal expression</th>
<th>Facial expression</th>
<th>Eyes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ready to the call, normal tone</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>Torpid to the call, normal tone</td>
<td>Initial slowdown</td>
<td>Medium relaxation</td>
<td>Medium relaxation</td>
</tr>
<tr>
<td>Only for repeat calls with high tone</td>
<td>Slowdown</td>
<td>Marked relaxation</td>
<td>Marked ptosis</td>
</tr>
<tr>
<td>Only if shaken</td>
<td>Not understandable words</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>No answers, even if shaken</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

**Figures**

Figure 1(abstract A26) Monitored anesthesia care.
The quality of life in patients treated for rectal cancer

M Mangiapane1, EV Bonafede, G Di Carlo, C Lo Piccolo, M Vitrano, G Diana
U.O.C. Chirurgia Generale e Geriatrica, AOU Policlinico di Palermo, Palermo, Italy
E-mail: mirman81@gmail.com

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Table 6(abstract A26) Ramsay Scale

<table>
<thead>
<tr>
<th>Ramsay Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Patient anxious and agitated or restless, or both</td>
</tr>
<tr>
<td>2</td>
<td>Patient co-operative, oriented and tranquil</td>
</tr>
<tr>
<td>3</td>
<td>Patient responds to commands only</td>
</tr>
<tr>
<td>4</td>
<td>Brisk response to a light glabellar tap or auditory stimulus</td>
</tr>
<tr>
<td>5</td>
<td>Sluggish response to a light glabellar tap or auditory stimulus</td>
</tr>
<tr>
<td>6</td>
<td>No response to the stimuli mentioned in items 4 and 5</td>
</tr>
</tbody>
</table>

Table 7(abstract A26) Average values of clinical and instrumental group P

<table>
<thead>
<tr>
<th></th>
<th>T10m</th>
<th>T20m</th>
<th>T30m</th>
<th>T40m</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIS</td>
<td>72 (42-45)</td>
<td>66 (35-88)</td>
<td>70 (55-82)</td>
<td>74 (52-88)</td>
</tr>
<tr>
<td>OAA/S</td>
<td>4 (1-5)</td>
<td>3.4 (1-5)</td>
<td>3.4 (1-5)</td>
<td>4 (1-5)</td>
</tr>
</tbody>
</table>

Table 8(abstract A26) Average values of clinical and instrumental group M

<table>
<thead>
<tr>
<th></th>
<th>T10m</th>
<th>T20m</th>
<th>T30m</th>
<th>T40m</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIS</td>
<td>64 (48-86)</td>
<td>58 (35-73)</td>
<td>62 (36-84)</td>
<td>66 (48-83)</td>
</tr>
<tr>
<td>OAA/S</td>
<td>4 (1-5)</td>
<td>3.4 (1-5)</td>
<td>3.4 (1-5)</td>
<td>4 (1-5)</td>
</tr>
</tbody>
</table>

Table 9(abstract A26) Propofol, Midazolam, Remifentanil during MAC

<table>
<thead>
<tr>
<th>Questionnaire items</th>
<th>Propofol</th>
<th>Midazolam</th>
<th>Remifentanil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onset of sedation</td>
<td>rapid</td>
<td>moderate</td>
<td>rapid</td>
</tr>
<tr>
<td>Resolution of sedation</td>
<td>rapid</td>
<td>lenta</td>
<td>rapid</td>
</tr>
<tr>
<td>Injection pain</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Intraoperative and postoperative pain</td>
<td>moderate</td>
<td>moderate</td>
<td>minimum</td>
</tr>
<tr>
<td>Hemodynamic depression</td>
<td>moderate</td>
<td>minimum</td>
<td>minimum</td>
</tr>
<tr>
<td>Respiratory variations</td>
<td>mild desaturation (&lt;30%)</td>
<td>minimum</td>
<td>moderate</td>
</tr>
<tr>
<td>PONV</td>
<td>minimum</td>
<td>minimum</td>
<td>minimum</td>
</tr>
</tbody>
</table>

Background: The aim of this study is to investigate the quality of life (QOL) in patients treated surgically for rectal cancer. We will evaluate different surgical treatments, complications, presence and absence of a protective or definitive stoma and how this can influence the patient’s quality of life.

Materials and methods: We have evaluated 69 consecutive patients (39 male and 30 female) operated for rectal cancer in our ward. The preoperative investigation includes, according to guidelines for CRC treatment: panendoscopy, chest radiography and a CT scan of the abdomen. The most appropriate surgical treatment was chosen depending on the results of the preoperative study (Table 1).

A standard questionnaire investigating the quality of life was administered to all the patients in the preoperative time (t0), in the early postoperative time (t1) and 3 (t2), 6 (t3), 9 (t4) and 12 (t5) months after the operation. Our questionnaire, the same as EORTC QLQ-C30 [1], QLQ-C38 [2] and SF-36 [3], is composed of the items described in Table 2.

Results: All the patients enrolled in the study answered our questionnaire. 31 of the patients underwent anterior resection of the rectum with total mesorectal excision (ARR), 24 underwent lower anterior resection (Low ARR), 9 underwent ultra-low anterior resection (Ultra-low ARR), 1 underwent Hartmann resection, 1 underwent abdominoperineal resection. Miles and 3 patients were treated by endoscopical resection (Table 3).

A temporary stoma was made in 32 patients, and a definitive one in 2 patients. The stoma was made only in the patients with an elevated risk of anastomotic leakage. The overall complication rate was 20.2%, interesting 14 patients of the total as described in the table 4.

The patients, in particular those with stoma, have a decrease of the QOL global index in respect to self image and social life. In t2, t3, t4, t5 the patients have a gradual improvement of their QOL although the patients with stoma always present a lower score (Fig. 1).

Conclusions: The perception of quality of life is a dynamic reality that changes according to the length of time we evaluate the patient. Our study, in agreement with scientific literature [4-6], confirms that quality of life increases with time and that although rectal cancer and its surgical treatment may produce functional and psychological deficit the QOL remains elevated.

Table 1(abstract A27)

<table>
<thead>
<tr>
<th>Questionnaire items</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>39</td>
<td>55</td>
</tr>
<tr>
<td>Female</td>
<td>30</td>
<td>45</td>
</tr>
<tr>
<td>Median age (years)</td>
<td>68.6</td>
<td>45-92</td>
</tr>
</tbody>
</table>

Table 2(abstract A27)

<table>
<thead>
<tr>
<th>Questionnaire items</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staging</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgical treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence of stoma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resume of non-working activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body functions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional functions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual functions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social relations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global QOL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3(abstract A27)

<table>
<thead>
<tr>
<th>Surgical Treatment</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARR</td>
<td>31</td>
<td>45</td>
</tr>
<tr>
<td>Low ARR</td>
<td>24</td>
<td>34.8</td>
</tr>
<tr>
<td>Ultra-low ARR</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>Others</td>
<td>5</td>
<td>7.2</td>
</tr>
</tbody>
</table>
Table 4 (abstract A27)

<table>
<thead>
<tr>
<th>Condition</th>
<th>N° patients</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anastomotic leakage</td>
<td>10</td>
<td>14.4</td>
</tr>
<tr>
<td>Fistula</td>
<td>3</td>
<td>4.3</td>
</tr>
<tr>
<td>Anastomotic stenosis</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>Total</td>
<td>14/69</td>
<td>20.2</td>
</tr>
</tbody>
</table>

Methods: Authors report the case of a 65-years old male, with a 15-year history of recurrent pilonidal disease. He was admitted to the General Surgery Unit because of the development of a bleeding ulcerated lesion in the pilonidal area. The patient underwent an incisional biopsy (showing squamous-cell carcinoma), preoperative staging with total body CT-scan, and finally radical surgery. The large wound healed by secondary intention. Definitive histology confirmed diagnosis and revealed tumour-free margins. After being discharged, the patient was followed up on as an outpatient.

Results: Hospital stay took 10 days, due to the complexity of the first medications. A posterior rectocele was observed, but no functional diseases were identified. The complete formation of the scar took three months. After six months, no complication or signs of recurrence were observed.

Conclusions: Squamous-cell carcinoma arising in a pilonidal sinus is a rare occurrence that develops only in long-standing pilonidal diseases. The tumour grows very slowly, but has a high local invasivity. Inguinal lymphadenopathies at the time of diagnosis is related to a poor prognosis. Local recurrence is usual and early. Enlargement of excision in case of local recurrence, and abdomino-perineal resection if sphincters are involved, may improve survival rates. There are not enough trials to assess the usefulness of preoperative or postoperative chemo- and radiotherapy.

References

A29 Rectus sheath hematoma, rare condition, difficult diagnosis and multidisciplinary treatment: report of 5 cases
Antonio Martino1, Ciro De Martino2*, Anna Pisapia3, Gautam Maharajan4, Marco Evangelista5
1Casa Di Cura “A. Grimaldi” di San Giorgio a Cremano (NA). Dipartimento di Chirurgia, Italy; 2Università degli Studi di Napoli “Federico II”. U.O.C. di Chirurgia Generale, Naples, Italy
E-mail: ciro.de@tiscali.it
BMC Geriatrics 2011, 11(Suppl 1):A29

Background: Rectus sheath hematoma is a rare condition. It encompasses a wide spectrum of severity (self-limiting to fatal) depending on its size, etiology, and the development of complications. It has multiple possible etiologies including, frequently, coagulation disorders or anticoagulation therapy. It enters into the differential diagnosis of abdominal pain but it’s frequently difficult to diagnose and radiological imaging is often required.

Methods: We report a series of five patients that came to our hospital within a 8-month period. The patients were between 63 to 78 years old. One of them was in therapy with warfarin, one was in therapy with acetylsalicilate and clopidogrel and in another patient, a coagulation disorder was detected. Diagnosis was suspected in all cases by clinical exam and ultrasonography, but CT-scan was necessary in three cases. All patients underwent conservative treatment, mainly pain relief and rest. In two cases blood transfusion was performed and in two cases clotting abnormalities were corrected with vitamin K and fresh frozen plasma. After being discharged, patients were followed up on as outpatients.

Results: All patients were treated conservatively. Average hospitalization was 10 days (range 5-17 days). The patient healed within three months at least. One patient developed infection of the hematoma and was treated with ultrason-guided aspiration and antibiotics.

Conclusions: Rectus sheath hematoma is a rare but important entity in the differential diagnosis of abdominal pain. Interdisciplinary awareness of this condition is essential, as it is frequently difficult to diagnose, leading to delay in treatment or unneeded surgery. CT-scan is the gold-standard investigation. Treatment options are variable and include conservative treatment, intravascular embolization and surgery. Frequently an interdisciplinary team approach is needed.

A28 Squamous-cell carcinoma arising in a pilonidal sinus: case report and review of the literature
Antonio Martino1, Ciro De Martino2*, Anna Pisapia3, Gautam Maharajan4, Marco Evangelista5
1Casa Di Cura “A. Grimaldi” di San Giorgio a Cremano (NA). Dipartimento di Chirurgia, Italy; 2Università degli Studi di Napoli “Federico II”. U.O.C. di Chirurgia Generale, Naples, Italy
E-mail: ciro.de@tiscali.it
BMC Geriatrics 2011, 11(Suppl 1):A28

Background: Squamous-cell carcinoma arising in a pilonidal sinus is a rare complication of a common disease. More than 60 cases are reported in literature. In all patients, squamous carcinoma arises in a long-term pilonidal disease. The gold-standard for treatment is radical excision of the neoplasm, with tumour-free margins. Some Authors consider the effectiveness of postoperative chemo- or radiotherapy, to reduce local recurrence.
References

A30
Emergency Surgery in the elderly patient
Antonio Martino1, Ciro De Martino2, Gautam Mahajan1, Marco Evangelista1, Rosa Maria Giamattei1, Anna Pisapia2
1Casa di Cura “A. Grimaldi” di San Giorgio a Cremano (NA). Dipartimento di Chirurgia, Italy; 2Università degli Studi di Napoli “Federico II”, U.O.C. di Chirurgia Generale, Italy
E-mail: ciro.de@tiscali.it
BMC Geriatrics 2011, 11(Suppl 1):A30

Background: Advances in surgical and anesthetic techniques combined with sophisticated perioperative monitoring are factors that have contributed to an expanding number of older adults undergoing surgery. Older persons often have multiple comorbid conditions that limit their functional capacity and increase the risk of death. An initial complication is much more likely to lead to other complications; failure of one organ, leads to failure of other organs.

Methods: A preoperative assessment is useful to identify factors associated with increased risks of specific complications and to recommend a management plan that minimizes the risks. Each person should be assessed individually, and judgments should be based on an individual’s problem and physiologic status, not on age alone.

Results: Advanced age, poor functional status at baseline, impaired cognition, and limited support at home are risk factors for adverse outcomes. However, when age and severity of illness are directly compared, severity of illness is a much better predictor of outcome compared to age. Emergency operations carry a greater risk compared to elective operations in all age groups, particularly elderly persons.

Conclusions: The ageing process of general population implies new socio-sanitary problems. Indications for surgical intervention have been modified and enhanced. As far as elective surgery is concerned, the results in elderly subjects do not seem alarming, whereas less satisfactory results have been registered in the patients who underwent emergency surgery, where nowadays morbidity and mortality are still high.

It will be possible to obtain better results through geriatric surgery only by reducing emergency interventions as much as possible. In order to do so, it is important to insist on intervening before the illness, during its natural evolution which requires actions that cannot be postponed. This would lead to positive results not only in terms of mortality and morbidity, which are still considered the main targets, but also in terms of length of hospital stay and rehabilitation.

A31
Damage control surgery: a new “way of thinking” in the treatment of the critically injured
Antonio Martino1, Ciro De Martino2, Gautam Mahajan1, Marco Evangelista1, Rosa Maria Giamattei1, Anna Pisapia2
1Casa di Cura “A. Grimaldi” di San Giorgio a Cremano (NA). Dipartimento di Chirurgia, Italy; 2Università degli Studi di Napoli “Federico II” U.O.C. di Chirurgia Generale, Italy
E-mail: ciro.de@tiscali.it
BMC Geriatrics 2011, 11(Suppl 1):A31

Background: Damage control is well established as a potentially life-saving procedure in a few selected critically injured patients. In these patients the “lethal triad” of hypothermia, acidosis, and coagulopathy is presented as a vicious cycle that often cannot be interrupted and which marks the limit of the patient’s ability to cope with the physiological consequences of injury.

The principles of damage control have led to improved survival and to the stopping of bleeding until the physiologic derangement has been restored and the patient could undergo a prolonged operation for definitive repair.

Methods: There are five critical decision-making stages of damage control: I, patient selection and decision to perform damage control; II, operation and intraoperative reassessment of laparotomy; III, resuscitation in the intensive care unit; IV, definitive procedures after returning to the operating room; and V, abdominal wall reconstruction.

Results: Although morbidity remains high, it is acceptable if it comes in exchange for improved survival. Damage control surgery offers a simple effective alternative to the traditional surgical management of complex or multiple injuries in critically injured patients. Phases I and II can be done at a rural hospital before transfer to a major trauma centre for definitive repair.

Conclusions: There is a complex interplay between primary injury, particularly major abdominal injury in the multi-system trauma patient, and secondary injury, which relates to patient physiology, decision making and surgical technique. Analysis of outcomes is further confounded by the variety of surgical techniques used. The challenge is to match the correct operation, for a critically injured patient, with the patient’s physiology. Excellence in general surgery does not equate with excellence in trauma surgery, and a clear understanding of damage control is essential.

References

A32
Preliminary results with Habib’s procedure
R Mastromarino1, S D’Angelo, A Saggiglio, G Rizzo, V Tammaro, N Carlomagno, A Rendi
Department of Surgical, Anesthesiology-Resuscitative and Emergency Sciences, Federico II University, Naples, Italy
E-mail: rossellamastr@alice.it
BMC Geriatrics 2011, 11(Suppl 1):A32

Background: In recent years liver resection has increasingly been performed. Bleeding and hepatic acute failure, secondary to vascular inflow occlusion (Pringle’s manoeuvre), remain significant complications; these problems seem to be higher in older patients and those with cirrhosis. Several surgical tools such as CUSA, Harmonic scalpel, Bipolar scissors, Ligasure diathermy, have been developed to decrease blood loss. Another device, based on radiofrequency, was proposed by Habib.1

The aim of our study was to evaluate Habib’s procedure and its influence in the outcomes of patients.

Materials and methods: From January 2009 to November 2010 we observed 11 patients with colorectal cancer hepatic metastases (ME) and 3 HCC patients; they were aged 71-84 y.o. (median age 75 years), m:f ratio = 1.3. In all cases Habib’s device and intraoperative US were routinely adopted. 2 Several parameters have been analyzed: age, sex, smoke abuse, comorbidity, ASA score, Child score, HBV+, HCV+, operation length, intraoperative bleeding, postoperative outcome, bowel motility, drainage outputs, hospital stay.

Results: We performed: metastasectomy (17 in 11 patients), wedge resection, (3 pts). We never used Pringle’s manoeuvre. Mean intraoperative blood loss was 150 ml (range 100-350 cc) and only one patient required a blood transfusion. The mean operation time was 90 min. Postoperative outcome was acceptable in all cases. Bowel motility start at 48h (range 24-36h). Mean drainage output was 150 cc at 24h and 80cc at 48h. There were no major systemic complications but one patient postoperatively suffered hepatorenal failure at the intensive care unit. Patients were discharged on the fifth day (range 4-12 days).
Discussion: Habib’s device allowed us to perform minor or non-anatomical hepatic resections without Pringle’s manoeuvre and with minimal blood loss.

In our experience postoperative hemorrhage and biliary leak were minimal, supporting the effectiveness of the device. Along with a low rate of resection specific complications, the rate of overall postoperative complication in this series was low.

Conclusion: Our results, despite the numbers, have been encouraging. It is our opinion that Habib’s device allows liver resections to be carried out with minimal blood loss and low morbidity and mortality rates.

References

A33
The control of postoperative pain in elderly patients undergoing total hip replacement under spinal anesthesia
DM Mattiacci, ML Mingione, D Delle Donne, B Lettieri*
Department of Anaesthesia, Surgical and Emergency Science, Second University of Naples, Italy
E-mail: biagio.lettieri@unina2.it
BMC Geriatrics 2011, 11(Suppl 1):A33

Background: The hip replacement surgery is intended to reduce the intensity of joint pain and improve quality of life in patients with arthritic disease. Advanced age is not a limit to surgical treatment for subarachnoid anaesthesia, which is well tolerated by elderly patients.

The aim of our study is to assess how spinal anesthesia with hyperbaric bupivacaine and buprenorphine and the subsequent use of an elastomeric pump can contribute to postoperative pain control in this type of surgery.

Materials and methods: We studied 42 patients (16M and 26F) ASA Class II and III. All patients underwent anesthesia sub arachnoid (needle 27G Whitacre, L3-L4, lateral decubitus), premedicated intravenously with 0.01 mg / kg of atropine, 2 mg midazolam, 500 ml NaCl 0.9% and monitored throughout the surgery. In group B 14 mg of hyperbaric bupivacaine 0.5% (2.6 ml) was administered while in group B + B 0.5% hyperbaric bupivacaine 12 mg (2.4 ml) was added to 0.06 mg buprenorphine (0.2 ml).

Before the end of the intervention, we administered 30 mg of ketorolac, tramadol 100 mg, 50 mg of ranitidine, ondansetron 4 mg in 100 ml of NaCl.

Upon completion an elastomeric pump containing 60 mg of ketorolac, tramadol 200 mg, 100 mg of ranitidine and ondansetron 4 mg (mixture of 60 ml at 2 ml / h for a total of 30 h) was applied to each patient. All patients were offered a test protocol used on the rating scale VAS. As soon as the patient was in position, he was stratified in two groups: Group A presented younger donors (<57 years) and Group B 67 years) and a higher number of donors with previous history of hypertension (92% vs 43%) and higher pre-harvesting creatinine values (1.2 vs 0.9 mg/dl). Post-transplant graft function did not

Table 1(abstract A33)

<table>
<thead>
<tr>
<th>Group</th>
<th>Average age</th>
<th>Average weight</th>
<th>Mean Time</th>
</tr>
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<tbody>
<tr>
<td>B 9M/12W</td>
<td>71.24 (DS+-/ 144.3)</td>
<td>70.24 Kg (DS+-/ 7.76)</td>
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<tr>
<td>B+B 7M/14W</td>
<td>74.81 (DS+-/166.66)</td>
<td>73.05 Kg (DS+-/10.59)</td>
<td>1.66 (DS+-/0.08)</td>
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</table>

Figure 1(abstract A33)

A34
Use of elder donors for cadaveric single kidney transplantation: a new evolution or an unacceptable risk?
F Melandro, Q Lai*, T Nudo, G Spoletini, GB Levi Sandri, L Poli, R Pretagostini, PB Belfocco
Department of General Surgery and Organ Transplantation, Sapienza University, Rome, Italy
E-mail: lalquirino@libero.it
BMC Geriatrics 2011, 11(Suppl 1):A34

Background: Organ shortage and long waiting times represent relevant issues in modern kidney transplantation [1]. Expansion of the donor pool using Extended Criteria Donors (ECD) represents a way to partially resolve these limits. ECDs are defined by UNOS as ≥ 60-year aged donors or 50-59-year aged donors with at least 2 of 3 risk factors (pre-procurement serum creatinine >1.4 mg/dl, cerebrovascular accident and history of hypertension) [2]. However, use of ECD seems to be related to worse results in terms of graft function and survival [3]. Moreover, no data exist with regard to comparison between over-60 and 50-59-year aged donors.

The aim of this study is to analyze the cohort of ECD transplants performed in our Department, evaluating the role of donor age on results.

Materials and methods: From January 2004 to May 2009, 95 single kidney transplantations using ECDs were performed. The entire cohort was stratified in 2 groups: Group A (50-59 years, n=26) and Group B (≥ 60 years, n=69). Donor, recipient and transplant characteristics were compared using the chi-squared and the Mann-Whitney test. Patient and graft survival were analyzed by the Kaplan-Meier method and compared using the log-rank test.

Results: Group A presented younger donors (55 vs 67 years) and recipients (53 vs 58 years), a higher number of donors with previous history of hypertension (92% vs 43%) and higher pre-harvesting creatinine values (1.2 vs 0.9 mg/dl). Post-transplant graft function did not
present statistical differences. Five-year patient and graft survivals results were similar (Fig. 1).

Conclusions: Use of ECD seems to be safe, even using very elderly donors. In our experience, biopsy-driven section is exclusively performed in over-60 donors. Starting from this consideration, we could speculate that the use of biopsy in 50-59-year donors with risk factors could further improve outcomes.

References

A35 Effectiveness of endovascular thrombolysis in acute mesenteric vein thrombosis
M Milone1, G Di Minno2, MND Di Minno2, V Iaccarino3, P Venetucci3, F Milone3*
1 Department of Surgery, Orthopedics and Emergency, Unit of General Surgery, “Federico II” University, Naples, Italy; 2 Department of Clinical and Experimental Medicine, Reference Centre for Coagulation Disorders, “Federico II” University, Naples, Italy; 3 Department of Radiology and Radiotherapy, Unit of Cardiovascular and Interventional Radiology, “Federico II” University, Naples, Italy
E-mail: francesco.milone@unina.it
BMC Geriatrics 2011, 11(Suppl 1):A35

Background: Mesenteric vein thrombosis (MVT) is a rare, often lethal, entity that accounts for approximately 10-15% of all cases of mesenteric ischemia [1,2]. Current indications for surgery in patients with acute MVT include signs of peritonitis, bowel infarction and hemodynamic instability. In all other cases, long-lasting anticoagulation is the strategy of choice [3,4], patients with MVT have a fairly good prognosis and long-term outcomes once appropriate anticoagulation is achieved [4,5]. At variance with the slow onset of recanalization that takes place during anticoagulation, thrombolysis leads to a rapid re-opening of a vessel, with immediate tissue reperfusion [4].

Materials and methods: We have followed up each for at least 3 years. 32 MVT patients (Table 1), 18 of whom (treated group) had undergone percutaneous transhepatic thrombolysis and mechanical thrombectomy prior to starting long-lasting warfarin treatment. The other 14 patients (control group) received only warfarin treatment. In each case and for

| A35 Effectiveness of endovascular thrombolysis in acute mesenteric vein thrombosis |
|---------------------------------|-----------------|-----------------|-----------------|
| Control Group | Treated group | Statistical significance |
| Asa 2 | 4 | 7 | P = 0.712 |
| Asa 3 | 10 | 11 | |

<table>
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<tbody>
<tr>
<td>5</td>
</tr>
<tr>
<td>Mesenteric</td>
</tr>
<tr>
<td>Mesenterico-portal</td>
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<tr>
<td>Spleno-mesenter-portal</td>
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<table>
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<td>4</td>
<td>6</td>
</tr>
<tr>
<td>≤ 14 day</td>
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</tr>
</tbody>
</table>

Table 1(abstract A35) Clinical diagnosis on admission
each patient, the rate of surgical approach (bowel resection) and the rate of long-term mesenteric-portal hypertension was evaluated.

Results: In 16/18 patients (88.8%) following the percutaneous treatment, flow restoration in the thrombosed mesenteric vein was documented by direct portal venography (Fig. 1). All patients with successfully recanalized MVT did not develop recurrent episodes during the long-lasting (1 year) oral anticoagulation therapy. The 30-day mortality rate was similar in the two groups (p=0.998). Bowel resection was needed in 1 patient (5.5%) in the treated group and in 5 patients (35.7%) in the control group (p=0.022 as to the rate of short-term surgical sequelae). A significant difference was also found as to long-term sequelae, especially portal hypertension (7/14 patients in the control group, 50.0%; 2/18 patients in the treated group, 11.1%; p=0.043) (Fig. 2).

Conclusions: MVT is still a serious disease, with a high mortality rate (25-35%), mostly related to transmural necrosis and bowel perforation due to the delay in diagnosis [1,6]. In the absence of major clinical signs and symptoms, the severity of bowel ischemia on admission is based on the evaluation of bowel wall thickness by contrast-enhanced CT scan (90% sensitivity). Macroscopically infarcted small bowel without transmural necrosis is potentially reversible with long-lasting anticoagulation [1,7-10]. Encouraging results of endovascular thrombolytic treatments have been reported in literature [11,12]. According to our results, when administered promptly, endovascular intervention using percutaneous transhepatic thrombolysis and mechanical thrombectomy appears to have a lower rate of early and late complications compared to warfarin treatment alone.

References
Malignant sigmoid-duodenal fistula: case report and review of the literature

V Minutolo, A Buttafuoco, G Gagliano, O Minutolo, R Lanteri*, A Racialbuto, A Licata
University of Catania (Italy) Department of Surgical Sciences, Organ Transplantation and Advanced Technologies. Via Santa Sofia 84, Catania, Italy
E-mail: lanteri@unicct.it
BMC Geriatrics 2011, 11(Suppl 1):A36

Background: Colonic-duodenal fistulas are rare, and may be secondary to benign or malignant conditions. Malignant duodenocolonic fistulas may also develop in patients with right colon or hepatic flexure carcinoma or duodenal malignancy. The sigmoido-duodenal malignant fistula is exceptional and, to our knowledge, only two previous cases have been reported. The first case was treated in our Institution in 1981 and published by Russello [1] and the second was reported by Melissa in 2002 [2] in the literature. We present the third case of malignant fistula between the duodenum and sigmoid colon in a 84-years-old male patient.

Case report: An 84-year-old white male was observed in our department. He came to his general practitioner with anaemia. He had an eight month history of diarrhoea and constipation, poor appetite, weight loss, nausea and vomiting. Blood tests revealed: a) two tumour markers outside normal range: CEA: 18 ng/ml e CA 19-9: 121U/ml; b) severe anaemia: Hb=7,0 gr/dl, RBC=3,23 mil/ul, Ferritin=4 ng/ml. The colonscopy revealed an ulcerated tumor about 25 cm from the anal verge obliterating the sigmoid lumen and not allowing the passage of the instrument. The fistula was not identified at endoscopy. The CT scan of the abdomen did not show the fistula and did not highlight any local spread or distant metastasis. The neoplastic lesion of the sigma of about 8 cm in length and 6 cm in thickness with tight luminal eccentric stenosis and dilatation of the colon upstream was highlighted (Figure 1). At laparotomy, the sigmoid colon, because of a dolicoocolon, was found to be adhered to the fourth part of the duodenum where the fistula was located. The patient had a surgical resection of the affected portion of the sigmoid colon and resection of the fourth duodenal portion (Figure 2). En bloc resection of sigmoid colon and duodenum respecting the anatomical margins and obtaining radical resection of the cancer was achieved. An end-to-end colorectal anastomosis was done using a circular stapler and an end-to-side duodenocolonic anastomosis using a manual suture. He did not have any post-operative complications. Histology demonstrated a primary adenocarcinoma of the colon, mucinous type, infiltrating the duodenum: pT4 N0 M0, Stage II, Dukes’ B. The resection margins were free of disease. The patient has not received adjuvant chemotherapy and after twelve months is alive and in good health, free from recurrent disease.

References
infection in patients undergoing elective abdominal surgery. Microbiological analysis of wound, surgical treatment, hospital and anesthesiological risk were evaluated.

**Patients and methods:** 78 patients, divided in group A (21pt age >70 years) and group B (57pt age < 70 years), were studied to assess the risk factors of abdominal surgical wound infection. Subcutaneous tissue swabs made after closure of the fascia and before suturing the skin were examined (Fig. 1). The indications for surgery were benign and malignant diseases such as abdominal hernias, gallstones, colorectal cancer, gastric cancer, kidney cancer, acute perforation of duodenal ulcer and chocking hemia. All surgical interventions were classified as clean or clean / contaminated. Antibiotic prophylaxis was performed only in 48 patients 60 minutes before surgery. The presence of wound infection was documented during the hospital stay and for up to 4 weeks after surgery.

**Results:** Of the 78 swabs, 30 were considered sterile. Of the 48 positive swabs microbiological analysis (47 isolations monomicrobici and only one polymicrobial) only 4 were associated with a wound infection (two strains of Escherichia coli, one Enterobacter cloacae and one Candida albicans). Moreover, in two speeches, in which the swab of the wound showed no microbial growth, there was an infection caused by Bacteroides fragilis (table 1). The incidence of surgical wound infection in group A (> 70 years) was of 9.52%, while in group B (<70 years) of 8.77% and 4.25% overall in patients undergoing antibiotic prophylaxis and 12.90% of patients who had not performed antibiotic prophylaxis (Tables 2-3).

**Conclusions:** In our series no statistical differences were observed between the two groups in relation to the age.

**References**


**Table 1(abstract A37)** Our series. Surgical site infections. Our series 7/78 (8.97%)

<table>
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<tr>
<th>Isolated species ( patient )</th>
<th>Surgical mean time (min.)</th>
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<tr>
<td><em>Escherichia coli</em> ( group A )</td>
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<tr>
<td><em>Escherichia coli</em> ( group B )</td>
<td>130</td>
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<tr>
<td><em>Enterobacter cloacae</em> ( group B )</td>
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<tr>
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<td><em>Candida albicans</em> ( group B )</td>
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**Table 2(abstract A37)** Relationship between surgical site infection, patient's age, surgical time and anesthesiological risk

<table>
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<tr>
<th>Patients</th>
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<th>Surgical site infection (%)</th>
<th>Surgical mean time (min.)</th>
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<tr>
<td>Group A</td>
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</tr>
<tr>
<td>Group B</td>
<td>37/57  (64.91%)</td>
<td>5/57 (8.77%)</td>
<td>129</td>
<td>III</td>
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**Table 3(abstract A37)** Relationship between surgical site contamination and sex

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<th>Sex</th>
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<tr>
<td>M</td>
<td>37/51  (72.54%)</td>
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<tr>
<td>F</td>
<td>11/27  (40.74%)</td>
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**A38**

New anesthetic programs for big elderly in day surgery

F. Oliva, G Dimarzo, M De Vata, B Lietti
Department of Anaesthesia, Surgical and Emergency Science, Second University of Naples, Italy

**BMC Geriatrics 2011, 11(Suppl 1):A38**

**Background:** Today the availability of new local anesthetics and the use of analgesics, allow the modulation of analgesia, maintaining a state of consciousness. An answer to the needs of patients >75 years undergoing surgery is the technique Monitored Anesthesia Care (MAC), defined “the middle land” (ASA 2003 – S.Francisco Figure 1).

**Materials and methods:** A study was conducted in double-blind, random, with 86 patients subjected to two different regimens of sedation technique Monitored Anesthesia Care (MAC). The indications for surgery were benign and malignant diseases such as abdominal hernias, gallstones, colorectal cancer, gastric cancer, kidney cancer, acute perforation of duodenal ulcer and chocking hemia. All surgical interventions were classified as clean or clean / contaminated. Antibiotic prophylaxis was performed only in 48 patients 60 minutes before surgery. The presence of wound infection was documented during the hospital stay and for up to 4 weeks after surgery.

**Results:** Of the 78 swabs, 30 were considered sterile. Of the 48 positive swabs microbiological analysis (47 isolations monomicrobici and only one polymicrobial) only 4 were associated with a wound infection (two strains of Escherichia coli, one Enterobacter cloacae and one Candida albicans). Moreover, in two speeches, in which the swab of the wound showed no microbial growth, there was an infection caused by Bacteroides fragilis (table 1). The incidence of surgical wound infection in group A (> 70 years) was of 9.52%, while in group B (<70 years) of 8.77% and 4.25% overall in patients undergoing antibiotic prophylaxis and 12.90% of patients who had not performed antibiotic prophylaxis (Tables 2-3).

**Conclusions:** In our series no statistical differences were observed between the two groups in relation to the age.

**References**


Table 1 (abstract A38)

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media dei valori strumentali e clinici del gruppo P

Table 2 (abstract A38)

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media dei valori strumentali e clinici del gruppo P

Table 3 (abstract A38)

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<th>Midodolam</th>
<th>Propofol</th>
<th>Remifentanil</th>
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<tbody>
<tr>
<td>onset of sedation</td>
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<td>moderate</td>
<td>fast</td>
</tr>
<tr>
<td>drug effects recovery</td>
<td>fast</td>
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<td>fast</td>
</tr>
<tr>
<td>pain at injection</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>intra-postoperative pain</td>
<td>moderate</td>
<td>moderate</td>
<td>minimal</td>
</tr>
<tr>
<td>hemodynamic depression</td>
<td>moderate</td>
<td>minimal</td>
<td>minimal</td>
</tr>
<tr>
<td>respiratory variations</td>
<td>slight desaturation (&lt; 30 %)</td>
<td>minimal</td>
<td>minimal</td>
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<td>ponv</td>
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</table>

comparing three methods of assessment: the clinical evaluation of drug effects on the CNS (Observer Assessment of Alertness/Sedation scale OAA/S), MAC has a sedation level of 3-4, the assessment of sedation according to Ramsay scale, and instrumental evaluation (Bispectral Index BIS). The clinical procedure was: 02 inhalation when the area was infiltrated with local anesthetic or BNP, when patients had pain a continuous infusion of remifentanil was activated: 0.025 to 0.05 mcgr/kg/m. Patients were dichotomized randomly into two groups with different sedation: group P (45 patients), starter bolus of 0.5 mg/kg propofol and continuous infusion of propofol 1-2 mg/kg/h; group M (41 patients), starter bolus of 0.03 to 0.05 mg/kg midazolam and then infusion of 1-2 ggr/kg/h. Tables 1 and 2.

Results: The scale of Ramsay sedation and OAA/S showed similar results, BIS values> 70 represented a significant predictor in the study of a more rapid recovery of state of consciousness, which has favored fast tracking. One fact that emerged from the study: the 3 scores of sedation are significantly correlated (P <0.001), but this correlation is lost in the M group when the values of BIS ≤ 70 in respiratory parameters is compromised greater than in group P (P = 0.001) Table 3.

Conclusions: The observation is consistent with results of White Anesth. Analgesia ’99, regarding the dose-effect curve of midazolam on the spectrum of activity of the CNS, three times higher than propofol. This leads to being more cautious in the use of midazolam in the MAC procedures.

References
Diabetic Foot Study Consortium. Negative bleeding could be demonstrated. 

Geriatric oncologic surgery is frequently based on palliative treatments. Few studies focus on the advantages and pitfalls of surgical versus endoscopic palliation in oncological surgery. The reviews published on this topic and a statistical non-specific general profile of our Institution's experience may depict a realistic and current general trend.

**Materials and methods:** Data from the literature were revised, focusing our attention on published reviews on surgical and endoscopic palliation for oesophagus, colon-rectum and pancreatic-biliary cancers. We also obtained the data from the registries of our hospital on these very diagnoses. Finally, we requested the number of metallic stents sold in Italy and in Europe to one of the main manufacturers, assuming that almost all of them are for oncological palliation.

**Results:** Even though most of the published reviews conclude favorably for a surgical palliation, the general trend appears to be more and more oriented towards the endoscopic palliation with stents. Little was written on the potential role of laparoscopy for surgical palliation.

**Conclusions:** There is a growing request for endoscopic treatments, strengthened by a priority scientific interest and technological development in this field, with growing responsibility for endoscopists and interventional radiologists.

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**A41**

Changes of serum calcium levels after thyroid surgery in the elderly

G Patrizi1, S Federici, M Fazi, F Pelle, L Fiengo, L Venturini, G Di Rocco, D Giannotti, F Frezzotti, R Giordano, A Redler
Dipartimento di Scienze Chirurgiche, Policlinico Umberto I, Università di Roma "La Sapienza", Rome, Italy
E-mail: g_patrizi@yahoo.com
BMC Geriatrics 2011, 11(Suppl 1):A41

**Background:** The reasons of transient hypocalcemia in the elderly, frequent after thyroid surgery, were investigated.

**Materials and methods:** Serum total calcium and phosphoremia were determined in all patients who underwent thyroidectomy before and after surgery. Beside these, total protein, albumin and parathormone levels were also determined. The daily changes in serum calcium and protein levels were measured in these patients.

**Results:** Transient, mild but significant decrease of serum calcium levels was observed after surgery in up to a fifth of patients, while severe hypocalcemia was shown in about 5% of patients. The reduction of calciemia was more evident in elderly patients, with a concomitant reduction of albuminemia. In severe hypocalcemia, in addition to these two findings, decrease of parathormone levels was shown.

**Conclusions:** We discuss the reasons for these findings, which are more frequently observed in elderly patients and the possible clinical implications to advise them to undergo total thyroidectomy.

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**A42**

Right colon angiodysplasia and lower limb chronic obstructive arteriopathy: simultaneous endovascular treatment

G Patrizi1, M Fazi1, L Fiengo1, G Di Rocco1, F Pelle1, D Giannotti1, G Di Rocco1, F Frezzotti1, R Giordano1, A Redler1, FM Salvatori1
1 Dipartimento di Scienze Chirurgiche, Policlinico Umberto I, Università di Roma "La Sapienza", Rome, Italy; 2 Dipartimento di Scienze Chirurgiche, Policlinico Umberto I, Università di Roma "La Sapienza", Rome, Italy
E-mail: g_patrizi@yahoo.com
BMC Geriatrics 2011, 11(Suppl 1):A42

**Background:** Intestinal angiodysplasia is a vascular artero-venous malformation of the enteric wall smaller than 1 cm whose main symptom is enterorhagia. Diagnosis is based on colonoscopy and mesenteric selective arteriography. Recently, spiral angi-CT has reached a good diagnostic sensitivity and specificity.

Radical treatment is still surgical resection. Endoscopic approaches are frequently employed even though relapse of hemorrhage and perforation can occur. Super-selective embolization represents another possible therapeutic option, despite the low risk of segmentary intestinal ischemia.

**Materials and methods:** We present the case of a 70 year old patient, with a past history of hypertension, myocardial infarction, who came to our attention for a chronic obstructive arteriopathy of the lower extremities and claudicatio at 100 m. The patient also displayed an hypochromic anemia (Hb=7g/dL); no history of evident bleeding could be demonstrated. Ultrasonography showed the left common iliac artery obstruction and patent femoral, popliteal and tibial arteries.

The patient underwent colonoscopy that revealed a reddish area in the caecum that could be referred to angiodysplasia, and two small pedunculated polyps (0.5 and 0.8 mm) that were resected. Histology gave evidence of a low-grade tubular adenoma. Abdominal and lower limbs arteriography confirmed the ultrasonographic suspicion and we therefore proceeded with primary stenting of the iliac obstruction. At the same time, selective arteriography of the superior mesenteric artery was carried out,
showing an angiographic appearance compatible with angiodysplasia of the terminal branches of the ileo-colic artery. Super-selective catheterization and embolization of the vascular malformation with metallic coils was then attempted successfully.

Results: Endoscopic and angiographic follow-up showed the disappearing of the angiodysplastic area. After 6 and 12 months, no evidence of relapse could be identified at endoscopy. An occult blood test in the stools was negative and complete regression of symptoms was steadily achieved.

Conclusions: Super-selective embolization is a safe and effective alternative option to surgical resections and endoscopic approach for the treatment of colic angiodysplasia.

A43
Superior mesenteric artery ischemia: endovascular approach

G Patrizi1, M Fazi2, L Fiengo3, G Di Rocco4, D Gennotti5, F Pelle6, F Frezzotti1, R Giordano7, L Venturini8, A Redler9, FM Salvadori7
1 Dipartimento di Scienze Chirurgiche, Policlinico Umberto I, Università di Roma “La Sapienza”, Rome, Italy; 2 Dipartimento di Scienze Radiologiche, Policlinico Umberto I, Università di Roma “La Sapienza”, Rome, Italy; 3 Dipartimento di Scienze Radiologiche, Policlinico Umberto I, Università di Roma “La Sapienza”, Rome, Italy; 4 E-mail: g.patrizi@yahoo.com

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Background: Mesenteric chronic ischemia is an infrequent pathology usually related to obstructive and stenosing atherosclerotic pathologies of one or more digestive arteries. Among these, the most frequently involved and revascularised is the superior mesenteric artery. There is a relative prevalence among the female elderly. Symptoms are often represented by the typical angina abdominis and weight loss. Diarrhea can occur and, without appropriate treatment, this condition can evolve into intestinal infarction.

Treatment can be carried out with traditional surgery or a more recent endovascular approach.

Materials and methods: We present the case of a 65-year-old patient who was on dialytic treatment for chronic renal failure, and in the past 18 months he was undergoing peritoneal dialysis. The latest sessions had to be interrupted because of the onset of peritonitic symptoms. In the patient’s personal history, besides hypertension and dislipidemia, he referred total thrombo-occlusive lesion of the mesenteric artery. In the last month, he was complaining of the onset of abdominal pain in the right iliac fossa after meals, with homolateral lumbar irradiation, and, more recently during dialysis, which had to be interrupted immediately.

Plain abdominal radiograms showed diffuse calcification of the aorta and its branches, especially in lateral projection, where remarkable calcifications of the celiac trunk and SMA were evident. Ultrasonography and Doppler demonstrated a pre-occlusive stenosis at the origin of the SMA and angioMRI confirmed these findings. Because of the poor general clinical conditions of the patient and to preserve the abdomen for a potential renal transplantation, the endovascular approach was considered the best option. A metallic self-expandable vascular (Wallstent) stent of 7mm x 3 cm was placed with a successful outcome.

Results: Postoperative course was uneventful with complete regression of symptoms and follow-up controls at 3, 6, 12 and 24 months showed no restenosis. The patient after this period is still asymptomatic.

Conclusions: Endovascular treatment is an effective therapeutic alternative to surgery for the treatment of chronic mesenteric ischemia.

A44
Improvement of quality of life in elderly after inguinal hernioplasty

Rodalia Patti, Paolo Aiello, Gaetano Di Vita
Department of Surgical and Oncological Science, University of Palermo, Italy
E-mail: divitagaetano@libero.it
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Background: Inguinal hernia represents one of the most common diseases in the elderly. It causes aching and unsightly swelling affecting quality of life (QOL), with a concomitant risk of strangulation. Despite this, an assumption of the risks of surgery may lead clinicians, particularly non-surgeons, to advise elderly patients against the repair of hernia, especially if asymptomatic [1]. The aim of this study was to evaluate QOL by a short Form 36 (SF-36) questionnaire [2] in elderly patients undergoing inguinal hernioplasty.

Materials and methods: Forty male patients of an age ranging from 65 to 92 years affected by unilateral symptomatic inguinal hernia were included and divided into two groups. 15 patients were allocated to the first group who refused hernioplasty, whereas, 25 patients who underwent to elective Liechtenstein hernioplasty were included in the second group, using a high density polypropylene mesh, under local anaesthesia. The SF-36 questionnaire was administered to all patients (both surgically treated and untreated ones) included in the study before and 6 months after surgery. Global analysis of the 8 domains of SF-36 and 2 comprehensive indexes of SF-36, Physical Component Summary (PCS) and Mental Component Summary (MCS) were performed.

Results: The two groups of patients were similar in age, type of hernia and surgical risk factors, morbidity and mortality in elderly patients. The two groups were similar in age, type of hernia and surgical risk factors, morbidity and mortality. A statistically significant difference was found according to ASA and Barthel and Charlson index. Liechtenstein hernioplasty caused no major complications. One patient from the untreated group underwent emergency surgery for hernia strangulation.

All 8 domains of SF-36 and MCS and PCS scores improved remarkably within 6 months after the surgery in patients who underwent inguinal hernioplasty. In the group of patients who received no surgical treatment no significant differences were detected.

Conclusions: Inguinal hernioplasty under local anaesthesia is a safe procedure for elderly patients affected by symptomatic inguinal hernia. It improves the QOL and therefore represents a clear cut indication for elective hernia repair in elderly patients.

References

A45
Efficacy of percutaneous radiofrequency ablation (RFA) for hepatocellular carcinoma in elderly patients

R Benevento, A Santionello, G Perna, S Canonico
Department of Gerontology, Geriatrics and Metabolic Diseases, Second University of Naples, Italy
E-mail: giuseppe_perna@alice.it
BMC Geriatrics 2011, 11(Suppl 1):A45

Background: HCC is the most common complication of liver cirrhosis, and the incidence of HCC increases with age in cirrhotic patients. The treatment of HCC in elderly subjects allows for some considerations. Hepatic resection can be safely done in cirrhotic HCC patients aging > 70 years, but the prognosis of these patients is less favorable than < 70 years patients, even when curative resection is achieved.

Liver transplantation is an exceptional measure for elderly patients, because they have a high incidence of concurrent diseases and are usually considered a high-risk group for major surgery. Radiofrequency ablation, alcohol injection and transcatheter arterial chemoembolization are not surgical treatments for HCC that are currently performed in elderly patients.

Materials and methods: Because few studies have addressed the outcome of RFA in elderly patients with HCC, we performed a retrospective study of 43 elderly patients (age 60-70 years) suffering from a total of 53 HCC treated with percutaneous RFA, from January 2002 to January 2008, in the Department of Gerontology, Geriatrics and Metabolic Diseases, Second University of Naples. The indications for RFA treatment were: HCC consisting of three or fewer nodules, each nodule having a maximum diameter of 30 mm; HCC consisting of a single tumor, regardless of size. In all patients hepatic function was not Child–Pugh grade C. Survival rates, curative effects, and complications of RFA treatment were evaluated. All of the 53 nodules were percutaneously treated under US guidance with all the patients having concurrent sedation or general anaesthesia. Complete ablation of the lesion after RFA treatment was assessed in all the patients using Contrast-enhanced ultrasonography, dynamic CT scans or MRI every 3–4 months during the follow-up period (mean 60 months).

Results: In thirty-five patients (81%) we obtained complete ablation in one session, in six patients (14%) in two sessions and in two patients (5%) in
These results suggest that RFA treatment should be addressed proactively even if the elderly HCC patient has concur ved diseases. Because the complications from the RFA procedure were fewer, RFA is considered a reliable treatment for HCC in terms of therapeutic efficacy and safety. RFA treatment might be considered above hepatic resection for elderly patients.

Reference:

A46
Laparoscopy in bili-pancreatic surgery in elderly
S Perrotta, V Desiato*, O Mazzei, GL Benassai, G Quarto, G Benassai
Departmento Universitario di Chirurgia Generale, Geriatrica, Oncologica e
technologie Avanzate school of Medicine, University Federico II, Naples, Italy
E-mail: vin.desi@hotmail.it
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Background: More minimally invasive techniques are currently available for the surgical oncologist in the optimal staging of biliopancreatic cancer. With the increased age of population we can see an increase of age-related diseases, such as a cardiovascular disease, hypertension, arthritis and other malignancies. With the development of endoscopy, laparoscopy, ultrasonography and biopsy equipment, more minimally invasive techniques are currently available for the surgical oncologist to provide a better optimal diagnosis and strategy, followed by an appropriate surgical treatment of biliopancreatic cancer.

Improvement in the diagnostic and surgical care of elderly cancer patients will have a final impact on disease and overall survival rates of the different types of cancer treatment.

Materials and methods: We retrospectively reviewed the records of patients between January 2001 and December 2008 who had either a mass in the biliopancreatic area classified as clinically resectable. Tumours were considered to be resectable when there was no evidence of distant extra pancreatic disease or involvement of lymphnodes outside the classic margins of resections. Occlusion or encasement of the superior mesenteric artery or vein, celiac artery or portal vein were used as a criteria for unresectability. Twenty-eight patients over 65 and under 75 years (middle age 69) with primary biliopancreatic cancer were submitted to operations for potentially operative resection. In all cases staging laparoscopy was performed just prior to planned open exploration and resection.

Results: Twenty seven patients underwent laparoscopy exploration for potential resection. Two of five patients (40%) with distal cholangiocarcinoma survived at 5 years after DCP. Eighteen patients (66.6%) had unresectable disease identified at laparoscopy and fourteen were able to convert to laparotomy palliative surgery while for the others laparoscopy spared an unnecessary laparotomy. In four patients it was possible to perform a laparoscopic palliative surgery.

Conclusions: Laparoscopy may have a role in the staging of patients with biliopancreatic malignancies, in particular, for reduction of unnecessary exploratory laparotomy.

Moreover, even in old age, duodenocorphaelapancreasectomy, properly planned and executed, resulted in reduction of operative mortality and morbidity and a clear long-term survival.

References:
2. Lee MK, Dinorcia J, Reavey PL, Holden WM, Genninger JM, Lee JA,

A47
Evaluation of fibrosis in cirrhotic elderly patients with HCC
A Pesce*, MA Trotavio, A Bianca, R Scilletta, TR Portale, S Pulero
Department of General Surgery, University of Catania, AOU Policlinico-
Vittorio Emanuele, Catania, Italy
E-mail: nino.fish@hotmail.it
BMC Geriatrics 2011; 11(Suppl 1):A47

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. Hepatopathy is considered an invasive approach and has a marginal role in the treatment of HCC [2,3]. The value of hepatic fibrosis is considered a predictive factor of outcome in patients with HCC undergoing liver resection [4].

Materials and methods: A retrospective analysis of 77 cirrhotic patients, 42 of them with hepatocellular carcinoma, observed from 2008 to 2010 was performed. The mean age was 65.2 years old with 46 men and 31 women. As regards cirrhosis etiology, 51 patients presented cirrhosis HCV-related, 9 HBV-related, 3 alcohol-related, 2 HBV-HDV co-infections and 12 other etiology. Liver function was assessed according to the Child-Pugh classification: 60 patients were in Child A, 13 in Child B and 4 in Child C. In all patients liver stiffness measurement (LSM) was performed using transient elastography (Fibroscan®). Forty patients were over 65 years old, thirty-seven under 65 yrs.

Results: The mean value of liver stiffness was 27.9 kPa (F4). In the group of elderly patients the mean value of liver stiffness was 25.2 kPa versus 31.2 kPa of the group of patients under 65 yrs. In the elderly group 37 patients were in Child A, 5 in Child B and one in Child C. In the other group 22 patients were in Child A, 8 in Child B and 3 in Child C.

Conclusions: These results confirm that the severity of liver fibrosis is directly associated with liver function (Child class) and not with the age of patients. Pre-operative liver stiffness measurement in cirrhotic elderly patients with HCC and Child class A could help us in the evaluation of surgical risk in order to reduce post-operative morbidity and mortality.

References:

A48
Angiosarcoma of the thyroid in an old man
P Petronella, F Freda, M Ferretti, D Fierro, M Scorzelli, S Canonico
U.O. of Geriatric Surgery, Department of Gerontology, Geriatry and Metabolic Disease, School of Medicine, Second University of the Study of Naples, Italy
E-mail: pasquale.petronella@unina2.it
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Background: The angiosarcoma of the thyroid gland is a primary malignant highly aggressive tumor. It is classified as a malignant vascular thyroid lesion of mesenchymal origin. In addition to the neck and head, the majority of angiosarcomas also originate from the skin and soft tissues, or limbs of patients with lymphedema.

Angiosarcoma of the thyroid is rare and the greatest incidence is witnessed near the Alps. It constitutes only 2-10% of malignant thyroid tumors in Switzerland, Austria and Northern Italy. The prevalence in the Alpine regions can be due probably to iodine deficiency with a long history of endemic goiter. It strikes in old age. There are cases in which the tumor occurs without a history of goiter, and it the occurrence is very unusual in non-alpine areas, so it seemed interesting to present a case involving this type.
Due to the increase of the thyroid volume, often occurring in a short time, dyspnea is a frequent symptom, associated with deviation of the tracheal axis. From the macroscopic point of view, this tumor typically appears to be with big dimensions, with large areas of necrosis and hemorrhage. Microscopically, freely anastomosed channels are often associated with a papillary configuration having a pattern of predominant intraluminal growth; the nuclei of the epithelioid endothelial cells are large, vesicular, smooth-contoured, with a large basophilic or amphophylic nucleolus connected by chromatin strands to the nuclear membrane. Typical and atypical mitosis were found in large numbers; the growth pattern is usually highly invasive and tumor necrosis is very strong. Of fundamental importance is the peculiarity that tumor cells express vascular markers such as Factor VIII, CD 31 and CD 34. The distinction between angiosarcoma and anaplastic sarcomatoid carcinoma is difficult and the same expression of the angiosarcoma has been subject to dispute. Clinical history: most of these tumors appear as a poorly encapsulated and infiltrating mass, which tends to grow in the absence of pain. Local recurrence, even after complete excision, and metastasis are common. After diagnosis, patients often die quickly. This type of cancer typically metastasizes in the first instance at the level of regional lymph nodes and lung, in the late stages in the bone marrow. Multimodal treatment, a widely accepted approach, envisages surgery, radiotherapy and chemotherapy. The study was inspired by the observation of a case of thyroid hemangiosarcoma in a 71-year-old man with a history of goiter for twenty years, who decided to undergo an operation for the worsening of dyspnea. Case report: A 71-year-old male came to our department complaining of dyspnea, hyperventilation and dysphonia, determined by swelling in the neck region, related to considerable increase of the thyroid gland. On examination, the thyroid gland also appeared fairly static during the acts of deglutition. With this pathology, the patient had been living for more than twenty years, without any type of therapy. An ultrasound examination dating back to 1997, documented a complete subversion of the echotexture of the whole gland and the presence of a large nodule in the right lobe displaying a complex echotexture. A further ecography in the year 2000 documented the increase in volume of the thyroid which was also the cause of the right carotid bulb dislocation. Among the laboratory tests, we also found significantly elevated thyroglobulin values. The preoperative FNAC was not significant and we decided to not repeat it for the necessary surgical indication due to worsening dyspnea. Neck and chest CT was performed without contrast from which was noticed, in the right lobe of the thyroid, a voluminous expansive formation characterized by a hyperdense rim surrounding large areas of liquid hypodensity and the presence of lymph node nodules in the right submandibular region. Also the left lobe of the thyroid appeared increased in size with hypodense nodular formations of colloid cyst type. It also showed a small nodular formation, of about 3mm in size, of dubious diagnostic ascertainment, in the posterior basal segment of the right lower lobe of the lung. Although surgical operation was expected to be very complex, it was performed in a completely linear way. The left lobe was easily separable from the surrounding tissue; it appeared in the throes of a nodular transformation and was immersed. The right lobe appeared uniformly in the throes of nodular and colloid cyst transformation and penetrated the upper part of the neck, adhering to the vessels, from which, however, it was easily dissociated; it measured about 15 cm. Lymph nodes were not visible. Surgical times were also lower than expected, particularly the removal of the right half was relatively easy and the mass appeared well encapsulated and demarcated. Histo-citopathological analysis revealed for the right lobe a nodule composed of necrotic hemorrhagic areas surrounded by a fibrous capsule within which there were anastomosing channels bordered by atypical epithelioid cells. The positivity for CD31 and factor VIII and the negativity for CK deposed for the diagnosis of thyroid angiosarcoma. Discussion: Our case’s peculiarities are represented by the patient’s lack of provenance from an Alpine area and by the absence of rapid growth, behavior that diverges from most of the cases described in literature.
Figure 3 (abstract A48) Right lobe of the thyroid.

References


A49

Indications to total thyroidectomy for multinodular goiter in old patients

A Puzziello*, AM Lucisano, R Gervasi, C Siani, MA Lerosse, G Orlando, N Innaro, G Vescio, R Sacco

U.O.O di Chirurgia Generale e di Endocrinocirurgia, Università Magna Grecia di Catanzaro, Italy

E-mail: puzziello@unicz.it

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Background: In Western society, the percentage of elderly people is continually growing. The prevalence of goiter increases with the age and it is estimated that 90% of women over 60 years old and 60% of men over 80 years old have a relief of thyroid nodules. This has great importance for these patients, because the incidence of malignant transformation is higher than younger ones and these are often tumor very aggressive patterns. If thyroidectomy is indicated for patients with suspected neoplasm and severe obstructive symptoms, their surgery should not be delayed since a late urgent operation could raise morbidity and mortality risk. The main indications for young patients are due to obstructive and metabolic causes over and above suspected cancer.

Total thyroidectomy is considered by many authors as the treatment of choice.

Materials and methods: 75 elderly patients were submitted to thyroidectomy. The indications were metabolic (42.6%), obstructive (32%) and for suspected cancer (25.4%).

Results: The most frequent complications observed with respect to young patients in different series have been cardiovascular, pulmonary or urological. Regarding the complications directly related to thyroidectomy, there were no differences compared to younger groups, except transient complications (hypoparathyroidism, seroma). In our experience, the main complication was represented by hypocalcemia (30.6%), permanent in 8% of cases. Cancer was relieved in 21.3% of cases.

Conclusions: Age is an independent prognostic factor for cancers. It has been demonstrated that elderly patients with PTC that are operated have better prognosis and quality of life due to the resolution of dyspnea and dysphagia. In our experience, we think that age is not a contraindication to thyroid surgery.

References


A50

Rectal prolapse treatment in elderly patients

A Racaibuto, I Aliotta, R Lanteri*, SA Carnazzo, V Minutolo, A Licata

Department of Surgical Sciences, Organ Transplantations and Advanced Technologies University of Catania, Italy

E-mail: lanteri@unict.it

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Background: Rectal prolapse in elderly patients can cause considerable discomfort causing bleeding, itching, wet anus and tenesm. In older patients the gold standard treatment uses a perineal approach. Success obtained by using circular staplers in the treatment of internal prolapses, associated or not with haemorrhoids or obstructed defecation, may represent a new method of choice if applied with the appropriate modifications, to the external rectal prolapse, for its speed, simplicity and
possibility to be performed under local anesthesia, and even in elderly patients with debilitating conditions.

Patients and methods: We have included in our study 11 patients older than 70 years (3 female and 8 male, mean age 76 years – range 71-84) who underwent observation for complete, permanent or after effort, external rectal prolapse. All patients suffered from rectal bleeding, in two cases considerable and with concomitant severe anemia (Hb <6.0), as well as itching and wet anus. Fecal incontinence was not present in any of the cases, but about half the patients (5 / 11) complained of “soiling”. Three patients had heart disease, three bronchitis, one diabetes and one Alzheimer’s. Before surgical treatment all patients were submitted to a pelvic examination, proctological anoscopy, anorectal manometry and defecography. All patients were included in a follow up program with a clinical examination at 1 month, 6 months, 1 year and a manometry at 6 months and 1 year.

Results: Surgical time (medium time 40 min– range 30-65 min) was lower than that of the traditional method (medium time 45 min – range 30-75 min) P= NS. Spinal anesthesia technique efficiently ensured the best conditions for the intervention. In the immediate postoperative period we observed one case of urine retention while an analgesic was necessary in three cases. 7 patients were discharged within 48 h after surgery, while four had a longer hospitalisation due to poor general conditions (1) or rectal bleeding (3). At follow-up (mean 26 months- range 6-32) 10 patients could be considered a complete success. One patient (sex M- age 82 years) presented recurrence at 6 months. A new treatment using the same procedure has solved the disease and he is well with no recurrences 18 months after the second procedure. Checks performed showed no difference before surgery for basal splanchnic pressure (mean 63 +/- 6 mmHg preoperatively, 58+/-3 mmHg after, P=NS) and for voluntary contraction pressure (mean 127+/-36 before and 118+/-25 after surgery, P=NS).

Conclusions: Our results demonstrated the advantage of our technique in elderly patients.

References

A52
Role of Standardized Perfusion Value (SPV) in the characterization of Solitary Pulmonary Nodules (SPN)
A Reginelli1, M Petrillo1, A Porto1, F Iacobellis1, S Cappabianca1, L Brunese2, A Rotondo2
1Section of Radiology, Department “Magrassi-Lanzara,” Second University of Naples, Italy; 2Department of Radiology, Health Science, University of Molise, Campobasso, Italy

Background: The SPV(stdandardized perfusion value) is used to compare tissue perfusion with average whole-body perfusion at enhanced MDCT; the SPV is conceptually similar in its derivation of the SUV(standardized uptake value) used to quantify FDG uptake at PET. The aim of this study was to characterize solitary pulmonary nodule (SPN) comparing SPV and SUV value.

Patients and methods: Twenty nine patients, age range 52-74, with SPN diagnosed with a chest radiography, underwent MDCT and PET and, if necessary, nodule biopsy. The SPV and SUV value were compared with histological features.

Results: Of the twenty nine patients, 21 underwent CT-guided FNAB with histological analysis and for 8 “wait and watch strategy” was adopted. Seventeen patients showed malignant SPN and four patients had benignant SPN at CT-guided FNAB. In patients with definite histology the specificity of SPV was 75% compared to 83% of SUV; the sensitivity (88%), the accuracy (85%) and the positive predictive value (94%) were equal for both. The negative predictive value of SPV and SUV was 60% and 67% respectively. The comparison of specificity, sensitivity and accuracy, between SPV and SUV was 90% (r=0.9), 100% (r=1) and 100% respectively.

Conclusions: The similarities between SPV and SUV suggest that the CT-derived SPV may be useful, not only for distinction of benign and malignant lesions, but also for acquisition of prognostic information and assessment of treatment response, with less exposure of ionizing radiations.

A53
Treatment of cholecysto-choledocolithiasis in elderly patients: personal experience
Agostino Ricotta, Maria Sofia1, Saveno Latten, Francesca R Cannemi, Gaetano La Greca, Domenico Rusello
1Department of Emergency Surgery, Cannizzaro Hospital, Catania, Italy

Background: Biliary stones are a common disease in western countries, and its management has changed dramatically over the past decade. Due to the increase of the middle-aged people, a larger number of elderly
patients are affected by this disease. Laparoscopic cholecystectomy (LC) represents the gold standard for the treatment of gallbladder stones, and in cholecystectomized patients, the treatment of CBD stones remains the exclusive work of the endoscopist. But if the patient still has the gallbladder with stones, the ideal management of CBD stones remains controversial. There are two treatment options: the two time (LC and pre or postoperative ERCP), and the one time procedures (trans cystic approach and CBD exploration and laparoendoscopic procedure called "rendezvous":RV). The aim of the work is to analyse our results of the minimvasive treatment of the cholecysto-choledocolithiasis in elderly patients.

Materials and methods: In the period between September 2008 and November 2010, all patients affected by CBD stones and admitted to the Department of Emergency Surgery of Cannizzaro Hospital in Catania, were analyzed, and from this group patients aged >65 years were considered for the present study. Age, sex, main clinical data, history, diagnosis, type of treatment, postoperative complications, length of hospital stay and mortality were recorded. Patients affected by cholecysto-choledocolithiasis were submitted to the LC and RV technique. If the patients couldn’t be submitted to this procedure because of high anaesthetic risks, ERCP was performed. However ERCP was always performed in cholecistectomized patients with jaundice, biliary pancreatitis, cholangitis and imaging showing CBD stones.

Results: In the period of the study we observed 68 patients with CBD stones, 37 were older than 65 years: 15 (40.5%) males and 22 (59.5%) female, with a mean age of 76.45 years (range 65 -93). Twelve (32.4%) patients were treated by LC and intraoperative clearance of the CBD by the RV. ERCP was performed in 22 (59.5%) patients: 8(21.6%) previous cholecistectomized and 14(36.6%) who still had their gallbladder, but with high anaesthetic risk. In one patient the RV technique failed and laparoscopic choleodocotomy was performed and a T-tube left in situ, but after 3 week trans-Kher cholangiography showed residual stones, so the patient was submitted to ERCP. In other two cases only LC was performed because the papilla of Vater was difficult to approach. The length of hospital stay was on average 7 days. Postoperative complications occurred in 7(20%) patients: one patient developed post-ERCP pancreatitis, two patients post-ERC prevalence of sieric amylase and lipase, three patients with early stones recurrence, one patient developed post- ERCP cholecystitis. Only one death was recorded.

Conclusions: For the treatment of the cholecysto-choledoco lithiasis, the RV technique is the best option, even in the elderly, because the morbidity and the risk of iatrogenic damage seem lower than ERCP. However in an older high risk patient the ERCP remains a good therapeutical option, achieving an acceptable risk of postoperative complications.

Table 1(abstract A54) Comparison of short and long-term outcomes in the two groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>OLDER (33)</th>
<th>YOUNGER (40)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median age (years)</td>
<td>80 (75-88)</td>
<td>66.5 (45-74)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Male gender</td>
<td>17 (51.5%)</td>
<td>28 (70%)</td>
<td>0.1</td>
</tr>
<tr>
<td>Median BMI (Kg/m²)</td>
<td>23.5 (16-30)</td>
<td>25 (20-29)</td>
<td>0.9</td>
</tr>
<tr>
<td>Median diverticulum size (cm)</td>
<td>3 (1-6)</td>
<td>2.5 (1-6)</td>
<td>0.2</td>
</tr>
<tr>
<td>Diverticulum size &lt; 3 cm</td>
<td>8 (24.2%)</td>
<td>21 (52.5%)</td>
<td>0.01</td>
</tr>
<tr>
<td>Median operative time (min)</td>
<td>30 (15-90)</td>
<td>20 (15-60)</td>
<td>0.2</td>
</tr>
<tr>
<td>Use of Endostitch</td>
<td>13 (32.5%)</td>
<td>14 (42.4%)</td>
<td>0.4</td>
</tr>
<tr>
<td>Postoperative complication</td>
<td>1 (3%)</td>
<td>0</td>
<td>0.3</td>
</tr>
<tr>
<td>Median follow-up time (months)</td>
<td>45 (5-108)</td>
<td>48.5 (5-104)</td>
<td>0.8</td>
</tr>
<tr>
<td>Long-term regurgitation</td>
<td>2 (6.1%)</td>
<td>3 (7.5%)</td>
<td>0.8</td>
</tr>
<tr>
<td>Long-term dysphagia</td>
<td>2 (6%)</td>
<td>4 (10%)</td>
<td>0.5</td>
</tr>
<tr>
<td>Satisfaction rate</td>
<td>27 (81.8%)</td>
<td>32 (80%)</td>
<td>0.8</td>
</tr>
<tr>
<td>5 year recurrence rate</td>
<td>11.6%</td>
<td>10.2%</td>
<td>0.8</td>
</tr>
<tr>
<td>Median time to recurrence (months)</td>
<td>21 (18-36)</td>
<td>9.5 (8-12)</td>
<td>0.04</td>
</tr>
</tbody>
</table>
Carotid endarterectomy versus stenting in octogenarians

A Savanelli, R Compagna, D De Vivo, R Rossi, F Fappiano, T Bianco, M Arnato, B Amato
Dipartimento Assistenziale di Chirurgia Generale, Geriatrica ed Endoscopia Diagnostica ed Operativa, Università degli Studi di Napoli “Federico II”, Napoli, Italy
E-mail: savanellilantonio@libero.it
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Background: Stents are an alternative treatment to carotid endarterectomy (CEA) for symptomatic carotid stenosis, but previous trials have not established equivalent safety and efficacy in octogenarian patients. We compared the safety of carotid stenting carotid endarterectomy (CAS). We conducted retrospective review of all cases of carotid stenosis treated with CEA and CAS.

Materials and methods: During a 7 year period from October 2000 to April 2007, 84 symptomatic carotid stenosis were treated at Department of general surgery of AUO “Federico II” of Naples 48 with CEA and 36 with CAS. We divided our patients in two group not randomly but according to valuation anesthesia. The age range in this group was 80 to 89 years (average age of 82.7 years). The indication for treatment were transient ischemic attack in (43.1%), Cerebrovascular accident in (23%), amaurosis fugax in (9.3%), vascular tinnitus in (2.6%) Associated risk factors included systemic arterial hypertension, diabetes mellitus, coronary artery disease and significant smoking history. All procedures were performed under local anesthesia. Comitamment or during the same hospitalization two patients underwent adjunctive procedures (coronary artery bypass, lung resection, colon resection).

Results: Carotid endarterectomies in octogenarian patients represented 18% of the total carotid endarterectomies performed at AUO “Federico II” of Naples. The postoperative hospital stay averaged 5.4 days for CEA and 3.7 for CAS. Thirty-day morbidity and mortality included 6 (16.6%) death for CEA and 2 (4.1%) death for CAS. There were no postoperative strokes in the CEA group while there were four postoperative strokes in the CAS group. There were 6 cases (12.5%) of total complication in the CEA group and 4 cases (11.1%) in the CEA group. Long term follow-up results were available. At 3 years survival 30 (62%) in CEA group and 30 (79%) in CAS group.

Conclusions: The incidence of stroke, death or procedural myocardial infarction was 12.5% in the stenting group compared with (11.1%) in the endarterectomy group. (CAS n°6 / CEA n°4). Risks of any stroke and all-cause of death were higher in stenting group than in the endarterectomy group. There were also fewer haematomas of any severity in the stenting group than in the endarterectomy group.Long-term follow-up is needed to establish the efficacy of carotid artery stenting compared with endarterectomy. In meantime, carotid endarterectomy should remain the treatment of choice for patients suitable for surgery. This experience suggests that carotid endarterectomy can be performed in elderly population with morbidity and mortality rates similar to those in a younger cohort. This suggests that if guidelines similar to those used in younger population are followed, paying close attention to associated risk factors, carotid endarterectomy can be performed safely in the elderly population. With the current trend toward growth of the aging population in our society, this information may become increasingly important for prevention of stroke and preservation of quality of life in a major segment of the population.

References

A56 Laparoscopic surgery in elderly patients with sliding hiatal hernia

R Scilitetta, A Pesce, MA Trovato, A Branca, TR Portale, B Scilitetta, S Puleo
Department of General Surgery, University of Catania, AOU Polliclinico- Vittorio Emanuele, Catania, Italy
E-mail: robertoscilitetta@gmail.com
BMC Geriatrics 2011, 11(Suppl 1):A56

Background: Surgery is recommended as treatment for the sliding hiatal hernia (SHH) in order to create a barrier to reflux of gastric contents into the esophagus and into the upper airways where could cause aspiration pneumonia. The aim of this study was to evaluate the results of laparoscopic surgery in elderly patients over 65 years, with SHH with typical and atypical respiratory symptoms, who have been followed up for 5 years.

Materials and methods: 235 patients with gastroesophageal reflux disease and SHH have been operated on from 2003 to 2010 at the Department of Surgical Sciences and Organ Transplantation of University of Catania. We conducted a study on 30 patients over 65 years belonging to that group. Patients’ characteristics:
- Mean age 69 years, 22 females and 8 males
- 3. Typical and atypical symptoms in 18, in 12 typical
- 4. Reflux esophagitis grade II in 14, III in 6, NERD in 10
- 5. Radiography of the upper digestive tract: SHH in 29 patients with an average diameter of 5 cm, in 1 case 2 / 3 of the stomach in the chest.
- 6. Preoperative value:
  - LES pressure: 5.4 mmHg (range 3.8 to 8.1), LES length: 1 cm
  - pHmetry median: 66.1

Surgery: Nissen Rossetti (NR) 360 ° fundoplication in 24; in 5 Toupet fundoplication 270° in patient with esophageal motility disorders, NR + Anterior gastropexy sec. Boherema in 1 case with a migration of the stomach into the chest. Section of short gastric vessels (SGV) in 16, and no section in 14.50 cc medium drainage, mean hospital stay: four days.

Results: Postoperative transient dysphagia in 2 patients without section of SGV and in 1 with section. No permanent dysphagia. Resolution of symptoms in typical and atypical in 87% of 19 patients who agreed to perform postoperatively functional tests.

Man postoperative LES pressure: 5 mmHg; LES length: 3.4 cm; De Meester score: 8.4.

Resolution of esophagitis in 4, with no typical and atypical symptoms. Average 5 kg weight loss.

SHH recurrence in 2 patients at 3 years, recurrence of typical and atypical symptoms in 4, in 3 of these there were no section of the SGV.

Conclusions: Surgery is the only therapeutic option able to create a mechanical barrier to reflux, that improves symptoms and stops both the development of Barrett’s esophagus on the underlying esophagitis and stops the digestive tract inhaling material. Surgery is, indeed, safe and effective and age does not represent a contraindication.

A57 Near infrared spectroscopy monitoring during carotid endarterectomy in elderly patients

A Scolaro, F Di Stefano, C Ramondetta, A Lomeo
AO per l’Emergenza Cannizzaro-Catania, Italy
E-mail: vascoli@videobank.it
BMC Geriatrics 2011, 11(Suppl 1):A57

Background: Various modalities are used for cerebral monitoring during carotid endarterectomy (CEA). The aim of this study was to evaluate the accuracy of transcranial cerebral oximetry (TCO ) for monitoring cerebral ischemia during carotid cross-clamping.

Materials and methods: 193, consecutive patients, 101 males, mean age 72 years, underwent CEA in our Institution from September 2007 to December 2009. All operations were only performed by two surgeons and all patients were monitored with TCO during general anesthesia. TCO
parameters were always registered in: base-line, anesthesia induction, 
carotid clamping and declamping, wake up and estubation. The 
relationship with TCO was described in terms of the decrease in 
percentage oxygenation. Standard endarterectomy was performed 
through a longitudinal arteriotomy. The majority of arteriotomies were 
sutured with a dacron patch. Primary suturing was done only when it 
was possible to use the eversion technique.

Results: CEA was completed successfully in all patients. The mean 
duration of cross-clamping of the carotid artery was 18 minutes. No 
major or minor strokes occurred and a shunt was never placed. Minor 
complications were 7 neck hematomas, 3 patients with hoarseness that 
cleared up and 1 patient with neuralgia over the operative scar that 
subsequently cleared up.

Conclusions: The principal goal of monitoring during CEA is to identify 
possible causes of neurological impairment sufficiently early to allow 
prompt correction of the cause. Mental status evaluation during carotid 
cross-clamping while the patient is awake remains the gold standard with 
which other methods of monitoring should be compared. Under general 
anaesthesia, monitoring with EEG remains the gold standard. In our study 
of 193 patients TCO was evaluated under general anaesthesia, for detecting 
cerebral ischemia during cross-clamping of the carotid artery for CEA. TCO 
showed a decrease greater than 20% in 24 patients. In all these cases 
somehow restored. Neuroanesthesiologists were convinced as hypertension and 
hypercapnia (40-45 mmHg) induction to restore the TCO normal range. In 
this case a shunt was never placed and no neurological problems occurred. We believe that under general anaesthesia, TCO is a practical and 
non-invasive monitoring system with high sensitivity.

A58

Lynch II syndrome: a case report
B Scotto*, E Spera, G Merola, D Di Simone
Department of Surgical, Anesthesiologic and Emergency Sciences. University 
Federico II, Naples, Italy. E-mail: segreteriadisalvo@gmail.com
BMC Genetics 2011, 11(Suppl 1):A58

Background: Lynch syndrome is an autosomal dominant cancer 
susceptibility syndrome that accounts for approximately 2–4% of all 
colorectal cancers (CRCs) and is caused by germline mutations of 
mismatch repair (MMR) genes [1-4]. It is characterized by an early onset 
of predominantly CRC and endometrial cancer (EC) as well as cancers of 
the stomach, small bowel, ureter and renal pelvis.

Materials and methods: We report a case of a patient 60 years old 
affected by synchronous primary cancers of the sigma and stomach 
diagnosed by TC. The patient had previously been operated on for the 
right hemicolecotomy for adenocarcinoma, and hysterectomy for cancer. 
During hospitalization the patient has undergone surgery on the left 
hemicolecotomy and a total gastrectomy. The patient underwent 
chemotherapy. Currently the patient is receiving chemotherapy for local 
recurrence.

Results: As a result of genetic study, the patient was found to be the first to 
have this mutation.

Conclusions: Surgery remains the front-line therapy for HNPPC. There is 
an ongoing controversy over the benefit of 5-flourouracil-based adjuvant therapies for HNPPC-related colorectal tumors, particularly 
those in stages I and II. After reporting a null finding from their 
randomized controlled trial of aspirin (ASA) to prevent against the 
colorectal neoplasia of Lynch Syndrome, Burn and colleagues have 
recently reported new data, representing a longer follow-up period and 
than reported in the initial NEJM paper. These new data demonstrate a 
reduced incidence in Lynch Syndrome patients who were exposed to at 
least four years of high-dose aspirin, with a satisfactory risk profile. 
These results have been widely covered in the media; future studies 
will look at modifying (lowering) the dose (to reduce risk associated 
with the high dosage of ASA).

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A59

Laparoscopic Cholecystectomy in the elderly
S Spezia, S Grassia, D De Rosa, DG Palmieri, N Carlmagnino, C Dodaro, 
A Renda
University Department of Surgical, Anesthesiology-Reanimation and 
E-mail: sergiospesiazza@libero.it
BMC Genetics 2011, 11(Suppl 1):A59

Background: Laparoscopic cholecystectomy (LC) has shown benefits, 
in order to become the universal gold standard for cholelithiasis and other 
diseases of the gallbladder. Such pathologies are very common in the 
elderly, but in these cases LC might pose problems because of the 
comorbidity frequently associated. The aim of this study is to evaluate 
the outcome of LC in the elderly.

Materials and methods: A retrospective study was conducted on 204 
patients affected by symptomatic cholelithiasis and other diseases of the 
gallbladder observed during the last four years (from January 2006 to 
December 2009). Patients were divided into two groups according to 
their age: a) < 75 y. o. – b) >= 75 y. o., to compare operative time, 
conversion rate to open cholecystectomy, complication rate and length of 
stay. Other parameters were evaluated such as sex, comorbidity 
(cardiovascular and respiratory diseases, hypertension, diabetes), previous 
abdominal surgery, diagnosis of acute cholecystitis and lithiasis of the 
common bile duct, biochemistry (leukocytosis, hyperbilirubinemia, 
transaminase) and ultrasoundography.

Results: There were 144 patients aged < 75 y. o. (Group a) and 60 
patients > 75 y. o. (Group b). The majority of the patients in each group 
were female (90 in Group a and 40 in group b). 184 patients underwent 
LC and the remaining 20 underwent open surgery. Comorbidity was 
higher in the elderly patients (40% vs 22%)

Open cholecystectomies were more frequently performed in the elderly 
(13.33% vs 8.3%) because of previous surgery, cardiac and/or respiratory 
failure and gangrenous cholecystitis. Scleroatrophy and acute inflammation 
were the main causes of conversion and had a marginal independent 
effect on the development of complications among elderly patients. After 
open cholecystectomy there were no complications but the hospital stay 
was longer Table 1

Conclusion: LC is the gold-standard for the elderly too. Results are quite 
similar in both groups thanks to an accurate selection of cases.

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the elderly: increased operative complications and conversions to 

Table 1(abstract A59)

<table>
<thead>
<tr>
<th>Group a</th>
<th>Group b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conversion rate</td>
<td>2.27 %</td>
</tr>
<tr>
<td>Complication rate</td>
<td>3 %</td>
</tr>
<tr>
<td>Operative time</td>
<td>45 min</td>
</tr>
<tr>
<td>Hospital stay</td>
<td>3.5 days</td>
</tr>
</tbody>
</table>
**A60**

Pluriannual experience in stapled haemorrhoidopexy in the elderly

S Spinelli, F Tona, C Sperl, M Gruppo, F Mazzalai, R Lorenzetti, M Di Guanta, C Saniro, O Terranova

Department of Surgery, Hospital, University of Padua, Italy; *Clinic of Gastroenterology and Digestive Diseases, University of Padua, Italy; *Clinic of Gastroenterology and Digestive Diseases, University of Padua, Italy; *Clinic of Gastroenterology and Digestive Diseases, University of Padua, Italy; *Clinic of Gastroenterology and Digestive Diseases, University of Padua, Italy; *Clinic of Gastroenterology and Digestive Diseases, University of Padua, Italy; *Clinic of Gastroenterology and Digestive Diseases, University of Padua, Italy; *Clinic of Gastroenterology and Digestive Diseases, University of Padua, Italy

**Results:** Between January 2004 and September 2010 we placed 42 TC in 42 patients including 25 males and 17 females between 65 and 92 years old (mean age 73 years). 7 of these patients were simultaneously subjected to another surgery to correct a defect in the abdominal wall. Among the 29 patients still living 4 TC are no longer used; 2 for recurrent peritonitis, 1 for considerable volume polycistic kidney disease and 1 was removed due to an undefined failure. The TC that are currently working are: 4/7 after 6 years, 1/2 after 5 years, 1/1 after 4 years, 1/1 after 3 years, 4/4 after 2 years, 9/9 to 1 years; 5/5 in the last 6 months.

In the post-operative abdomen X-rays were performed in 7 of the 26 patients who showed different locations of the distal end of the catheter: 3 in Douglas, 1 in the left side, 2 in the right side, 1 in the right upper quadrant.

**Conclusions:** Placement of the TC under spinal anesthesia with open technique, not necessarily placing the tip in the Douglas, is a simple technique that guarantees good results with low operational risks and peri-operative complications, especially for elderly patients. The results of this technique in combination with concomitant hernias are particularly relevant.

**References**


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**A61**

The Tenckhoff catheter in elderly patients with chronic renal failure: placement in spinal anesthesia with open technique, without required location in the hollow of Douglas

T Strazzullo, G Prestieri, D Di Simone, G Merola

Department of Surgical, Anaesthesiologic and Emergency Sciences, University Federico II, Naples, Italy

**Results:** Between January 2004 and September 2010 we placed 42 TC in 42 patients including 25 males and 17 females between 65 and 92 years old (mean age 73 years). 7 of these patients were simultaneously subjected to another surgery to correct a defect in the abdominal wall. Among the 29 patients still living 4 TC are no longer used; 2 for recurrent peritonitis, 1 for considerable volume polycistic kidney disease and 1 was removed due to an undefined failure. The TC that are currently working are: 4/7 after 6 years, 1/2 after 5 years, 1/1 after 4 years, 1/1 after 3 years, 4/4 after 2 years, 9/9 to 1 years; 5/5 in the last 6 months.

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**References**


complications observed in both groups and the absence of claims of medical liability.

References

A63
Decision making in elderly HCC
M A Travato, A Pesce, R Scilletta, A Branca, F Mosca, S Puleo
Department of Surgical Sciences, Organ Transplantation and Advanced Technology University of Catania, Catania
E-mail: mantrov@hotmail.it
BMC Geriatrics 2011, 11(Suppl 1):A63

Background: The decision making process in hepatocellular carcinoma (HCC) relies on multiple factors. Hepatic surgery, in fact, has to take into consideration a patient’s general medical condition, performance status, underlying liver disease, functional hepatic reserve. All these factors affect hepatic metabolism, flux and regeneration mechanism conditioning future liver remnant volume. What is more, hepatic regeneration is delayed, even if not completely impaired, in the elderly. Nevertheless age is not always properly taken into account.

Materials and methods: The aim of this retrospective study is to evaluate the usefulness of Barcelona Liver Cancer Clinic (BCLC) in the treatment of HCC, comparing our treatment decision and the BCLC algorithm indications, especially considering elderly patients. In 164 patients affected by HCC treatment the choice was compared with that proposed by BCLC. We performed a univariate analysis considering factors such as sex, age, Child, Okuda, PST and ethiology which influence the decision making process.

Results: We did not find statistically significant evidence for all the parameters analysed but for age and performance status test (PST) we have had different findings.

In patients submitted to surgery the average age was 63.00 (IQR 56.75-67.75), while patients not surgically treated were of an average age of 68.00 (IQR 60.00-73.00). In this case the χ2 showed a significative difference (p = 0.03) demonstrating that the younger patients were submitted more easily to surgery when compared with the older group.

Analyzing PST groups (0, 1, 2) we found that patients submitted to surgery were belonged to an earlier PST class by contrast with those who underwent other therapies, with a statistically significative p value = 0.04.

Conclusions: Analysing our conduct in treating HCC, we can conclude that our decision making process especially in surgical indication has been influenced by factors regarding the patients, for instance age and PST which require the multidisciplinary HCC team to pay more attention.

References

A64
Surgical treatment for primary hyperparathyroidism in the elderly: a single-center analysis
Department of Vascular and General Surgery, Faculty of Medicine “La Sapienza”, Roma, Italy
E-mail: luigi.venturini@ostclait.it
BMC Geriatrics 2011, 11(Suppl 1):A64

Background: The suspicion of a hyperparathyroidism is mostly guided by the finding of an increase in serum calcium levels by routine measurements. Primary hyperparathyroidism is a common disease occurring in 0.2 to 0.5% of the population. The incidence in the United States is approximately 100000 new cases per year and increases with age affecting up to 2% of elderly people [1].

Materials and methods: From January 1995 to December 2009, 172 patients underwent operations for Hyperparathyroidism, 130 of these were Primary Hyperparathyroidism at our Department of General Surgery. Patients were divided into two groups: patients of ≤ 69 years old (Group A) and patients of ≥ 70 years old (Group B). The following variables were studied: demographic characteristics, co-morbidities, preoperative symptoms, laboratory values, operative procedures, postoperative complications and anatomo-pathological findings.

Results: Group A: 110 patients operated 25 were male, 85 were female with a M:F ratio of 0.3:1. Mean age at admission was 52.4 (SD±12.9). We reported a morbidity rate of 5.4% (6 patients) and a mortality rate of 0%. Group B: 29 patients operated 6 were male, 16 were female with a M:F ratio of 0.25:1. Mean age at admission was 74.2 (SD±3.7). We reported a morbidity rate of 5% (1 patient) and mortality rate 0%.

Conclusions: Elderly patients with Hyperparathyroidism present a variety of symptoms that are often different from those seen in younger patients. They are more likely to manifest fatigue and psychiatric symptoms that are difficult to distinguish from those due to their age, therefore in the majority of cases the suspicion of hyperparathyroidism is guided by the finding of an increase in serum calcium levels on a routine measurement. If serum calcium level is high or if hypercalcaemia is discovered, measurement of PTH confirms the diagnosis [2,3]. Cervicotomy and parathyroidectomy is still to be considered as the treatment of choice in elderly patients with primary hyperparathyroidism.

References

A65
Quality of life in octogenarian with non small cell lung cancer: the strategic role of video assisted thoracic surgery
N D Vicidomini*1, G Guggino2, G Monaco2
1Unità di Chirurgia Toracica, Università degli Studi di Napoli Federico II, Napoli, Italy; 2Unità Operativa di Chirurgia Toracica, AORN Antonio Cardarelli, Napoli, Italy
E-mail: vineda81@libero.it
BMC Genetics 2011, 11(Suppl 1):A65

Background: The aim of the present study was to assess the surgical approach in octogenarians comparing the benefits of video-assisted thoracic surgery (VATS) with the open thoracotomy and analysing early and long term quality of life (QOL) changes.

Materials and methods: We reviewed 42 consecutive octogenarians (mean age 82.3±1.4 years) with a preoperative FEV1 of 1.5 L or less who had undergone pulmonary resection for stage I non-small cell lung cancer (NSCLC). Patients were divided into two groups according to surgical approach (VATS group n=22; thoracotomy group n=20) and their postoperative complications and prognoses were evaluated. Quality of life was assessed using Medical Outcome Study Short-Form 36-item Health Survey (SF-36) just before surgery and at 6 and 12 months postoperatively.

Results: Morbidity rate and postoperative hospital stay were significantly different between VATS and thoracotomy group (p=0.01; p=0.0003, respectively). A worse decrease in thoracotomy vs VATS group was demonstrated in five domains at 6 months, and in all domains at 12 months of SF-36 questionnaire. The thoracotomy group presented a significant reduction in the dyspnoea index, FEV1 and DLCO at both 6 and 12 months.
Conclusions: In octogenarians with NSCLC and compromised pulmonary function the long-term survival justifies the operative treatment, and minimally invasive surgical approach enables surgeons to extend resection in these high-risk patients if selected appropriately.

References

Background: The treatment of aortic aneurysms in elderly patients, especially those aged around 80, has undergone a significant change with the introduction of aortic stent (EVAR). Although some studies are in progress regarding the improvement of long-term results with regard to "open" surgery, there is no doubt that the exclusion of the aneurysm with a stent is more acceptable in terms of the immediate patient management, morbidity and mortality. In our institution we have had a significant increase in the treatment of patients with aortic aneurysm treated with EVAR. We present data for the last two years 2009 and 2010.

Materials and methods: In our Centre, from January 2009 to November 2010, 168 aneurysms of the thoracic and abdominal aorta were treated, of which 135 were elective and 33 emergency. Of these 39% were patients over 75 years of age. In 2009 we operated 52 patients of whom 7 (13.45%) for thoracic aortic aneurysm and 45 (86.55%) for aneurysms of the abdominal aorta. 6 thoracic aneurysms (86%) were operated on electively and 1 (14%) urgently, all with a stent implant. 40 aneurysms of the abdominal aorta (89%) were operated on electively (of these 25 (62.5%) with EVAR and 15 (37.5%) with "open" surgery) and 5 (11%) in emergency (all in "open"). In 2010, 116 patients were treated, of which 20 (17.3%) had an aneurysm of the thoracic aorta and 96 (83.4) an aneurysm of the abdominal aorta. 14 aneurysms of the thoracic aorta (70%) were operated on electively and 6 in emergency (30%), all with EVAR. 80 aneurysms of the abdominal aorta (83.3%) were operated on electively (of these 70 (87.2%) with EVAR and 10 (12.5%) treated with "open" surgery) and 16 (16.6%) in urgency (two of these (12.5%) with EVAR and 14 (87.5%) treated with "open" surgery).

Results: The mortality rate in elective patients was 0.7% (1 patient underwent an endograft for abdominal aorta), while in emergency mortality was 18% (6 patients all operated in "open"). In one patient who underwent aortic stent there was an acute renal failure with permanent dialysis. Cardiological problems were resolved before discharge.

Conclusions: The treatment of aneurysms of the thoracic and abdominal aorta has improved in terms of mortality and morbidity after the introduction of EVAR. In our experience, which tends to expand the use of aortic endoprostheses, there are no substantial differences in outcome between EVAR and "open" surgery. Elderly patients maintain better treatment with an aortic stent graft.

References