

Meeting abstract

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## Advanced laparoscopic surgery in the elderly: experience of a single centre

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### Objective

Elderly patients have an increased frequency of associated complex comorbidity than younger, but several well-designed trials have demonstrated the efficacy and safety of laparoscopic surgery in recent years. In fact, the experience and the progress in geriatric advanced laparoscopic surgery have increased over the past decade.

A laparoscopic approach can be used safely for miscellaneous conditions, not only for elective surgery, when adequate attention is paid to perioperative care: correction of hemodynamic instability, correction of hematocrit and coagulopathy, control of ventilator complication, early recognition of a depleted nutritional status.

The aim of this study was intended to evaluate retrospectively our experience in advanced laparoscopic approach in elderly patients.

### Materials and methods

Between June 2002 and June 2008, 361 elderly patients were considered for laparoscopic surgery (61.5% were over 75 years of age). Laparoscopic colon, gastric and esophageal procedures are among the alternatives implemented for the geriatric surgery. Most patients were ASA II or upper. 266 procedures were for colorectal disease including malignant disease (174 colorectal carcinoma, 44 polyps with displasia not amenable to endoscopic removal) and benign disease (complicated diverticular disease, complicated IBD).

In the colorectal group we performed: total colectomy (n = 13), right hemicolectomy (n = 66), left hemicolectomy (n = 101), low anterior resection (n = 65), abdominoperineal resection (n = 11), transverse colon resection (n = 13).

75 consecutive aged patients underwent minimally invasive surgery for gastric diseases: gastric carcinoma (n = 55), GIST (n = 6), Vanek tumor (n = 1), redo gastrectomy (n = 7), giant hiatal hernia (n = 6). Gastrectomy, BII resection, Gastrotomy, and Nissen-Rossetti fundoplication with mesh in the hiatus were the techniques required.

Laparoscopic management was feasible in 17 liver diseases (hepatocarcinoma, metastatic tumors, giant hepatic cyst and others lesions not amenable percutaneously).

Enucleation and distal pancreatectomy with spleen preservation for benign lesions were performed laparoscopically in 3 elderly patients.

### Results

For colorectal disease there were no intraoperative death and 1 postoperative death. Mean operative time was 170 minutes (range 138–303). The patients were discharged on day 5 to 12 (with a mean of 7 days). In 8 cases, reoperation was necessary because of postoperative obstruction in 3 cases, for anastomotic fistula in 3 cases and for bleeding in 2 cases. The rate of severe complication was 2.9% in patients <75 years old and 2.3% in those over 75

years. The conversion rate was 2.8% in <75 years and 5.7% in >75 years.

#### **Gastric disease**

there were no intraoperative death and 3 postoperative deaths. Mean operative time was 225 minutes (range 131–385). The patients were discharged on day 9 to 25 (with a mean of 10 days). In 3 cases reoperation was necessary, because of postoperative duodenal stump leak in 2 cases (1 over 75), and for bleeding in 1 case. The rate of severe complication was 3.9% in <75 and 4.3% in >75. The conversion rate was 4.8% in <75 and 6.8% in >75.

#### **Liver disease**

there were no intraoperative death and no postoperative death. Mean operative time was 164 minutes (range 97–370). The patients were discharged on day 5 to 28 (with a mean of 9 days). In 1 case reoperation was necessary, because of bleeding (over 75). The rate of severe complication was 4.9% in <75 patient and 5.1% in >75. There were no conversions.

#### **Pancreas disease**

there were no intraoperative deaths and 1 postoperative death. Mean operative time was 184 minutes (range 121–323). The patients were discharged on day 5 to 18 (with a mean of 10 days). The rate of severe complication was 1.9% in patients under 75 y.o. and 3.1% in patients over 75. There were no conversions.

#### **Conclusion**

The result and the rate of complication of advanced laparoscopic surgery in elderly was comparable to open surgery, also in our experience, even if operative time was longer. Moreover, in elderly patient several benefits were reported, in term of fewer cardiopulmonary complications, less necessity of blood transfusion, reduced surgical stress, reduced post-operative immune depression, reduced length of ileus, less operative pain, rapid turn to physical activities and shortened hospital stay.

In our experience, laparoscopic surgery present also less surgical site infection and a shorter time of return to oral feeding.

In our institute, however, recovery after advanced surgery was improved considerably by combining the use of laparoscopic technique with a multimodal rehabilitation protocol of pain relief, early mobilization and oral nutrition.

It is concluded that advanced laparoscopic surgery in the elderly, provided technical expertise and a long learning curve to the surgeon, a good selection of patients, a good intraoperative monitoring and a good postoperative reha-

bilitation, is safe, feasible and oncologically correct, producing less morbidity and mortality respect to open surgery.

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