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#### GENERAL ONCOLOGICAL ASPECTS OF LAPAROSCOPIC SURGERY Ch. Herfarth, Ruprecht-Karls-University, Heidelberg, Germany

Talking about laparoscopic oncological surgery in general surgery today particularly means surgery of the colon and rectum. Endoscopic techniques in colonic surgery are certain to become an important field in Minimal Invasive Surgery. Laparoscopic colonic surgery is still in the stage of methodological and technical development. Only laparoscopic assisted colonic resections are already in clinical evaluation. Although results of various Surgical Departments show the feasibility of the techniques, all statements on indication, especially in cancer surgery must be regarded as preliminary. The advantage of these procedures may be the fact that the extent of abdominal incision is significantly reduced and no retractors have to be used as in open surgery. This might be a crucial factor in reducing intra- and postoperative stress. The presumption that less pain may decrease immunological response and its possible influence on tumor progression yet has to be proven by clinical and experimental trials.

Laparoscopic surgery of the colon and rectum for cancer can only become a standard procedure if it meets the requirements of conventional open surgery in oncology. These requirements are 1) complete resection of the mesocolon, 2) central ligation of the colonic blood- and lymph vessels, 3) no touch isolation of the tumor, 4) preparation of key structures such as duodenum and ureters, and 5) ligation of the colon above and below the tumor.

It has been shown in several clinical studies that the lymph node harvest in laparoscopic colonic resection can be as extensive as in open surgery. Central ligation of blood and lymph vessels is also possible as well as preparation of the key structures and ligation of the lumen of the colon. Only the no touch isolation of the tumor is much more difficult in laparoscopic surgery. The graspers even if they are of the Babcock or Ellis type tend to slip off the bowel and may lead to a disparation of tumor cells in tumors which have penetrated the colonic wall. The removal of the operative specimen either through the rectal stump or through a small abdominal incision seems also oncologically unsound in cases of larger tumors. We therefore think laparoscopic surgery for cancer of the colon and rectum should be evaluated in prospective randomized trials and should be restricted to tumors which are confined to the colonic or rectal wall. The assessment of these tumors can be done by either laparoscopy or even better by preoperative endoscopic ultrasound of the colon.

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#### ESOPHAGECTOMY BY THORACOSCOPY: PROS AND CONS.

T. LERUT

Division Thoracic Surgery, Catholic University Leuven, Belgium.

The recent developments in videoscopic surgery have been resulting in an interest to perform oesophagectomies for oesophageal carcinoma using minimal invasive access. Oesophagectomy by VATS again exacerbates the discussion on closed versus open transthoracic oesophagectomy as the ideal approach in surgical treatment of oesophageal carcinoma.

In six patients it was decided to attempt mobilization by VATS as a part of the surgical treatment of oesophageal carcinoma. All patients had an early stage carcinoma with T1 tumour and no evidence of lymphnode evidence. In four patients the procedure was completed without major difficulties. However, one patient died postoperatively due to hepatic and pulmonary insufficiency secondary to liver cirrhosis.

The results in terms of postoperative morbidity and recovery were not superior as compared to the open surgery. Moreover feasibility of adequate and extensive lymphadenectomy with this technology is at this moment very questionable. It is our impression as well as others that unless further refinement of the equipment is obtained there will be only very few indications for VATS oesophagectomy for patients with oesophageal carcinoma.

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#### PELVIC AND AORTIC DISSECTION BY LAPAROSCOPY

Querleu D. Department of Obstetrics and Gynecology,  
Pavillon Paul Gellé, Roubaix, France

Because of the poor accuracy of nonsurgical methods in the detection of small pelvic or paraaortic lymph node metastasis, and because of the cost and discomfort of surgical staging, laparoscopic lymphadenectomy may be included in the staging of early pelvic malignancies, particularly cervical carcinomas. An ovarian transposition may be performed laparoscopically before radiotherapy. We have described the technique of pelvic lymphadenectomy by laparoscopy (Querleu, 1989). Childers (1992) described the first cases of elective low paraaortic lymphadenectomy. We have recently reported cases of infrarenal paraaortic lymphadenectomy (Querleu, 1992). 135 cases have been operated upon since december 1988, including 15 cases of paraaortic lymphadenectomy. In some cases laparoscopic and/or vaginal surgery for cervical, endometrial or ovarian carcinomas have been performed.

Key words : Laparoscopic surgery, lymphadenectomy

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#### STATE OF THE ART OF LAPAROSCOPIC MANAGEMENT OF OVARIAN DISEASE, RISKS AND BENEFITS.

GG Kenter

Department of Gynecology and Gynecologic Oncology, University Medical-Center, Leiden, The Netherlands.

Development of laparoscopic surgical technics has resulted in an increase of its use in the treatment of ovarian disease. However, no large studies are published to compare the results of laparoscopic treatment to laparotomies. Both over- and undertreatment can occur.

The S.G.O reported 42 cases of laparoscopically treated ovarian tumours that turned out to be malignant. Good pre-operative selection could have prevented mistakes. The predictive value of vaginal ultrasound varies from 71% for benign disease to 100% for malignant disorders. Benign ultrasound criteria are: unilocular, unilateral cysts, less than 10 cm diameter, without septa, papillary projections, solid parts, adhesions, and ascites. The negative predictive value of vaginal ultrasound is higher as that of cytology of cyst fluid. Adding the tumourmarker CA-125 to pre-operative screening in postmenopausal women increases negative predictive value to 100%. In premenopausal women more false positives can be expected. Tumourmarkers should be used only in combination with clinical examination and ultrasound.

Laparoscopic treatment of ovarian disease has great advantage for the patient when used after careful pre-operative selection following strict criteria. A review from the literature of the latest results will be given.

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