Laparoscopic versus conventional colorectal surgery-a comparative trial

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Laparoscopic colorectal surgery had a somewhat difficult evolution. It is technically difficult, with a broad field of mobilization requiring multiple careful port placement, need to deal with major vascular pedicles and the handling of larger surgical specimens. Aim of the present study is to make a comparison between laparoscopic and conventional colorectal surgery of cancer.

Key words: laparoscopic surgery, colorectal carcinoma

INTRODUCTION

Laparoscopic colorectal surgery has had a somewhat difficult evolution. It is technically difficult, with a broad field of mobilization requiring multiple careful port placement, need to deal with major vascular pedicles and the handling of larger surgical specimens.

AIMS

Aim of the present study is to make a comparison between laparoscopic and conventional colorectal surgery of cancer.

METHODS

We made a retrospective comparative analysis of two groups of patients with colorectal cancer. The patients were selected by gender, age, tumour stage and codiseases. For two years period (2000-2001) we have operated 104 patients with colorectal cancer and out of these number we used 67 for comparative analisys: 31 patients were operated by laparoscopic method (Gr. 1) and 36 patients by conventional method (Gr.2). The ratio female/male was almost equal in both groups: 1/1.6, and the age was between 40-75. All cases were adenocarcinomas in similar TNM stages. In Gr. 1 the codiseases were: 5 cases with arterial hypertonia and 3 cases with pulmonary emphysema, and respectively in Gr. 2 - 7 cases with arterial hy-

RESULTS

The operative time was mean 155 min for Gr. 1 and 104 min for Gr. 2. The hospital stay was 5.2 days in Gr. 1 and 8.7 days in Gr. 2. Passage was restored on the second day in average (Gr. 1) and on the fourth day respectively in Gr. 2. All patients in Gr. 1 were on oral fluid on the first postoperative day and on food on the second postoperative day. There were no intraoperative complications observed in both groups. The postoperative complications were as follows: in Gr. 1 pulmonary microthromboembolism-1; postoperative pneumonia- 0; wound infection (port-site infection)-1; uroinfection-2 and in Gr. 2 pulmonary microthromboembolism-3; postoperative pneumonia-1; wound infection-2; uroinfection-3. There were three conversions (9.6%) performed in Gr. 1. One incidence of port-site recurrence and 1 incidence of wound recurrence were observed. Tumour recurrences were found in Gr. 1 in two cases (6.4%) and in Gr. 2 - in three cases (8.3%). In addition, the above mentioned cases arose after surgery for advanced disease-a serosal primary (T3). The histopathological research of the resection materials showed clear resection margins in both groups. There were found 14-18 lymph nodes and 13-15 in Gr. 2.
DISCUSSION

Laparoscopic surgery is feasible, and although technically difficult, with a fairly flat learning curve. Operating time was longer than open surgery but appeared to shorten with increased experience. Average hospital stay was generally shorter than in open series. The most obvious is less surgical stress with reduced ileus and faster recovery, leading to earlier feeding and discharge. Conversion rates depend on exclusions, experience and threshold. It also appears that laparoscopic resection for colorectal cancer can probably achieve certain similar oncological outcomes as open surgery in terms of lymph node clearance and patterns of recurrence. The incidence of wound and port-site recurrence is similar to that in open surgery. Tumour recurrence rates generally seem in line with those observed in open surgery. Although not a major endpoint, the preservation of body mimicry is an advantage of the laparoscopic approach. However, there are case selection effects to consider and longer-term follow-up is needed.

CONCLUSION

Despite of long operative time, laparoscopic colorectal surgery was technically feasible and safe and it has advantages as same as the other laparoscopic surgeries. We can seriously consider the laparoscopic approach as an alternative to open surgery.