Laparoscopy in colon cancer: The new standard?

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There are few topics in surgery as challenging and controversial as the role of laparoscopy in malignant colonic disease. Whilst laparoscopic cholecystectomy has been rapidly become the gold standard in the treatment of gallbladder lithiasis, laparoscopic surgery for colon cancer has remained controversial for a long time and it is still a matter of discussion.1-6

Since first performed in 1991, this technique was not widely accepted by the surgical community. Criticism towards this new approach initially regarded the increased risk of port site metastasis and the diffusion of neoplastic cells inside the peritoneum due to the insufflation. The impossibility of a manual evaluation of neoplasm and its dissemination was considered a reduction of the role of the surgeon. Moreover, there was not a general consensus on the effectiveness of this technique, the oncologic radicality, the short and long-term outcome, wide-ranging costs and ease of learning. Open surgery still seemed to be the most effective treatment of colon cancer.

In the mid and late 1990s, several multi-centre clinical trials started, randomising patients with colon cancer to laparoscopic or open surgery in order to assess definitive results on effectiveness in terms of oncological outcomes. These studies progressively modified initial diffidence and confirmed what short-term benefits had widely demonstrated.7-9,11

Laparoscopic colectomy determines a significative reduction in the hospital stay length, a faster return to oral diet, bowel function and earlier resumption of a normal diet. Cosmetic advantage and the shorter scar are obviously well appreciated. The use of analgesic requirement is reduced due to a less post-operative pain. As regard long-term oncologic outcome, no significative differences were noted between open and laparoscopic surgery: local recurrence rate, cancer-specific survival rate.12-15,17,20,21

Adequacy of oncologic resection has also been demonstrated equivalent to open surgery.22

Another point of discussion was the economic aspect. Laparoscopic colectomy usually requires more operating theatre time and the use of more expensive disposable equipment. But higher operation costs are compensated by lower costs of hospitalisation. As a matter of fact total hospital charges are directly related to the learning period. As soon as surgeons get more skilled, laparoscopy-correlated costs get lower and are similar to conventional open surgery.15-18 Shortening of leaning period becomes fundamental for achieving cost-effective laparoscopic surgery. On the other hand, the process of technical assimilation of laparoscopic colectomy is very long and must be conducted cautiously, keeping in mind that even referral colorectal centres use laparoscopy in a percentage of 25% total colonic surgery.10,19 Out-of-hospital costs have not yet been evaluated.23,24

A comparison of stress response after laparoscopic and open surgery was also investigated. Laparoscopic surgery induces less trauma than open surgery on peritoneal and systemic immune system and this reflects on a better short-term outcome.

In conclusion, there are still many matters of discussion amongst the surgical community about the secure viability of this technique for all the segments of colon and rectum. The results of many studies undoubtly highlight that laparoscopic and mini-invasive colon surgery are as oncological safe and efficacious as the conventional open technique, it being understood that the principles of surgery are not neglected.4

Laparoscopic approach is definitively an option to be offered to patients.1

Conflict of interest statement

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REFERENCES


