ASO Author Reflections: Minimally Invasive Surgery for Colorectal Cancer: Where Do We Stand?

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Since 1991, interest in minimally invasive surgery (MIS) for colon cancer has been increasing because of comparative studies showing better short-term outcomes in terms of postoperative pain, return of bowel function, length of hospital stay, and cosmesis in favor of laparoscopy. Despite the initial evidence, laparoscopic surgery was not widely adopted due to reports of cancer recurrence at the trocar sites.¹ Once it became clear that wound recurrence was not a specific laparoscopic issue (<1% after both laparoscopic and open resection),² several multicenter randomized controlled trials (RCTs) were conducted to demonstrate the non-inferiority of MIS for colon cancer. Large RCTs from Europe, United States, Australia, and New Zealand, started in the 1990s and concluded in the early 2000s, clearly demonstrated that laparoscopy offers better short-term outcomes without impairing oncologic results.³

Fueled by the evidence for colon cancer, several RCTs focusing on rectal cancer have been designed and conducted more recently. The late adoption of MIS for rectal cancer reflects the technical complexity of pelvic surgery. Five RCTs have shown results mirroring those obtained in colon cancer,³ but with mixed short-term pathologic outcomes questioning the absolute benefits of laparoscopic resection for rectal cancer. As we await long-term results of these studies, no reasons exist to limit the use of MIC in rectal cancer.

The use of robotic platforms and the transanal transabdominal bottom-up approaches recently have been proposed to overcome the technical limitations of laparoscopy. Large RCTs are needed to define their role for rectal cancer patients.

In conclusion, current evidence supports the routine use of laparoscopy for colon and rectal cancer.

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