Editorial

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Advances in surgery for locally advanced rectal cancer

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Rectal cancer, especially locally advanced rectal cancer (LARC), presents surgical technique challenges due to anatomical constraints. In the past, open surgery was considered the standard surgical treatment for rectal cancer, but there has been a more recent trend toward laparoscopic surgery. Laparoscopic surgery has favorable short-term outcomes such as less pain, rapid recovery, reduced blood loss, and fewer postoperative complications compared to open surgery [1]. Recently, results on long-term outcomes in terms of oncologic safety of laparoscopic surgery for rectal cancer have been published.

Nasir et al. [2] studied the feasibility of laparoscopic surgery for LARC by comparing surgical outcomes between LARC and non-LARC groups using propensity score matched analysis. They showed comparable short-term outcomes such as open conversion, reoperation, anastomotic leak, and 30-day mortality rate between LARC and non-LARC groups. Also, pathologic outcomes such as R0 resection and harvested lymph nodes were similar between the two groups. Several randomized controlled trials and observational studies have explored the outcomes of laparoscopic surgery for LARC. The COREAN (Comparison of Open versus laparoscopic surgery for mid and low REctal cancer After Neoadjuvant chemoradiotherapy) randomized controlled trial demonstrated the oncologic feasibility of laparoscopic surgery in LARC patients with preoperative chemoradiotherapy [3]. Recent, large-cohort studies of LARC patients showed the feasibility of laparoscopic surgery based on short-term and long-term results [1, 4]. In contrast, the ACOSOG Z6051 randomized controlled trial comparing laparoscopic surgery and open surgery in LARC failed to demonstrate the non-inferiority of laparoscopic surgery for pathologic outcomes such as completeness of total mesorectal excision and negative resection margins [5]. Follow-up oncologic outcomes of the ACOSOG Z6051 trial did not find significant differences between laparoscopic surgery and open surgery in 2-year disease-free survival and recurrence [6]. Recently, results on the surgical feasibility and oncological safety of laparoscopic surgery for lateral pelvic lymph node dissection and pelvic exenteration beyond total mesorectal excision in LARC have also been reported [7, 8]. Advanced techniques such as robotic surgery and transanal minimally invasive surgery are being introduced, and studies on their feasibility in LARC are being conducted [9].

Minimally invasive surgery including laparoscopic surgery has become widespread, with better short-term outcomes and favorable oncologic safety reported in many studies. Although there are still technical hurdles and further research on long-term outcomes is needed, the application of minimally invasive surgery in LARC is expected to gradually expand. Therefore, it is necessary to define appropriate indications and standardize surgical techniques to establish the emerging roles of minimally invasive surgery in LARC.

CONFLICT OF INTEREST

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