Editorial

A bridge to surgery for obstructive colorectal cancer

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Colorectal cancer can present as an emergency, with bowel obstruction, perforation, and bleeding, requiring urgent surgical intervention. Bowel obstruction was reported to be seen in 15–20% of patients with colorectal cancers (1,2). The treatment for obstructive colorectal cancer (OCRC) has been of great interest to colorectal surgeons because of poor surgical outcomes. Emergency surgery has been a standard treatment for OCRC; however, it is associated with high rates of mortality (15–20%), morbidity (40–50%), stoma formation, and poor long-term survival (3). Emergency surgery occasionally requires a staged procedure, especially in patients with poor clinical conditions, since primary resection and anastomosis (PRA) are deemed to contribute to life-threatening postoperative complications (4). Although the feasibility of PRA in selected patients has been gradually accepted, performing PRA in patients with OCRC requires familiarity with complicated surgical techniques, such as intraoperative colonic irrigation and subtotal colorectal resection, as well as optimal patient selection (5).

In recent years, the use of a self-expandable metallic stent (SEMS) as a bridge to surgery (BTS) has increased. Bowel decompression using a SEMS enables a patient to undergo an elective laparoscopic surgery after colonic examinations and preparations. Many authors reported that SEMS placement as a BTS improved short-term surgical outcomes in left-sided OCRC (4). A recent meta-analysis of eight randomized controlled trials comparing stenting as a BTS and emergency surgery in left-sided OCRC showed significant reductions in the rates of stoma formation, overall complications, wound infection, and successful primary anastomosis; although, no significant difference was observed in mortality rates (6). Despite better short-term outcomes, there are concerns about detrimental oncological effects due to stenting. Moreover, the European Society of Gastrointestinal Endoscopy (ESGE) issued clinical guidelines in 2014, where SEMS was not recommended as a BTS for standard treatment of left-sided OCRC because of potential concerns about impaired oncological outcomes after SEMS placement in a patient with potentially curable colon cancer (7).

Tube decompression is an alternative to SEMS as a BTS. Although it has been clinically used for OCRC before insurance approval of colonic stenting in Japan, there is insufficient evidence regarding its usefulness in the absence of a randomized clinical trial (4). In the latest issue of the *Asian Journal of Endoscopic Surgery*, Hosono *et al.* compared short- and long-term outcomes between two BTS methods that either involved a SEMS or an intestinal tube (8). They demonstrated that SEMS might be more effective than a decompression tube as a preoperative treatment for achieving successful laparoscopic resection without stoma formation. Thus, laparoscopic surgery could be performed in 95% (19/20) of patients treated via SEMS, in contrast to 59% (13/22), in patients treated via a decompression tube. Moreover, the rates of primary anastomosis without stoma were 95% (19/20) and 68% (15/22), in the SEMS and decompression tube groups, respectively. They also showed the superiority of SEMS regarding preoperative oral intake, preoperative serum albumin level, and preoperative

endoscopic examination of the proximal colon, suggesting a much better ability of SEMS to resolve bowel obstruction compared to decompression tubes.

In theory, SEMS has a clear advantage over tube decompression in that it does not require extracorporeal outlets. Patients with decompression tubes usually cannot eat food even after colonic decompression. They often feel uncomfortable with the tube passing through the anus or the nose, and the smell of intestinal contents is unpleasant. A possible advantage of tube decompression over SEMS might be that it does not produce continuous expansion pressure on the tumor, which may facilitate cancer dissemination. However, the recurrence-free survival rates of the two groups in this study were similar, failing to show any clinical advantage of tube decompression. Previous comparative studies also failed to show superiority of tube decompression, and the cost-effectiveness has not been well studied (9-12).

Although this study examined two BTS methods, we should be aware of the possible harm involved with BTS manipulations as stated in the ESGE guidelines (7). In our study, perforation was observed in 5% (1/20) and 4.5% (1/22) of patients in the SEMS and decompression tube groups, respectively. These rates are consistent with those of a meta-analysis of eight randomized controlled trials (5.6%) (6) and other studies on tube decompression (0–10%) (4), with the same oncological concern regarding tube decompression as with SEMS.

Previous pathological studies showed that SEMS placement might promote perineural invasion (13-15) or lymph node metastases (13). It has also been suggested that stenting might increase tumor cell dissemination into the peripheral circulation (16-18). It is notable that venous invasion of the tumor was also significantly frequent in the SEMS group in this study. Although the impact of these changes on clinical prognosis is unknown, we should be careful about the possible detrimental effects of stenting.

Despite the demerits, BTS might be an attractive option with less morbidity and stoma formation in acute management of OCRC. The ESGE guidelines describe the use of SEMS as an acceptable BTS treatment option in patients older than 70 years and/or with an ASA score of ≥ III. A majority of patients with OCRC have a frail condition, such as old age, severe comorbidities, and poor nutritional status. Moreover, the oncological risk caused by stenting may be decreased by improved insertion techniques. A recent prospective multicenter study in Japan, in which information on a safe stenting procedure was shared among the involved institutions, showed a high (94%; 392/418) clinical success rate with a low (1.9%; 8/426) perforation rate (19). It is important to balance the risks and benefits of the different treatment options for OCRC according to the medical condition of the patient, and further research on this issue is required.

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Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

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