Extralevator Abdominoperineal Resection in the Prone Position

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The conventional abdominoperineal resection (APR) has been the gold standard for the surgical treatment of low rectal cancer. Regardless of the approach, the APR represented a uniquely challenging procedure where the surgeon is expected to reduce the circumferential resection margin (CRM), local recurrence (LR) and wound complications. For cancer patients, excision of the anal canal with a wide circumferential margin, including a cylindrical cuff of the levator, muscle was introduced.

As described by West et al. [1], compared with standard surgery, the extralevator APR (ELAPR) may reduce CRM involvement (from 49.6% to 20.3%, $P < 0.001$) and intraoperative perforation (IOP) (from 28.2% to 8.2%, $P < 0.001$), but with an increase in perineal wound complications (from 20% to 38.0%, $P = 0.019$). In contrast, they did not demonstrate the statistically differences in CRMs and wound complications between the groups. A meta-analysis study by De Nardi et al. [2] found significant differences in the CRM involvement rate (odds ratio [OR], 2.9; $P < 0.001$), intraoperative perforation (OR, 4.30; $P < 0.001$), local recurrence rate (OR, 2.52; $P = 0.02$), and length of hospital stay (OR, 1.06; $P < 0.001$) in favor of the ELAPR group. Additionally, perineal wound complications were higher in the extended group (OR, 0.62; $P = 0.007$). Yang et al. [3] reported that ELAPR had a lower rate of intraoperative perforation and local recurrence than APR in terms of short follow-up time. Yang et al. [4] reported better results in laparoscopic ELAPR: a 6.1% CRM rate, 15.2% morbidity, and no mortality.

The perineal dissection can be performed in the lithotomy position or in the prone position after closure of the abdomen and creation of the colostomy. The author [5] reported that compared to the conventional APR, the ELAPR in the prone position did not have advantages in terms of perioperative complications and pathologic outcomes such as the CRM. In my opinion, the ELAPR in the prone position for treating patients with lower rectal or locally-recurrent pelvic cancer allows better exposure of the operative field and more precise perineal dissection according to the tissue plane and leaves open the possibility of an en-bloc combined resection of the sacrum or coccyx in difficult cases with sacral invasion. However, we need further randomized controlled studies to clearly identify the advantages and the disadvantages of the ELAPR in the prone position.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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