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VIDEO FORUM

Transperineal abdominoperineal resection synchronously assisted by laparoscopic approach for low rectal cancer directly invading the posterior wall of the vagina

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Description

Abdominoperineal resection (APR) has been the gold standard surgical treatment for patients with advanced low rectal cancer, but the procedure has not improved patients' oncological outcome compared with those who undergo low anterior resection [1]. This relatively poor prognosis of APR is mainly due to the high rates of a positive circumferential resection margin (CRM) [2]. In cases of APR with positive resection margins, 57% of cases were reported to be located anteriorly [3]. It is still an anatomical challenge to obtain CRM for an anterior advanced rectal cancer, especially for T4 cancer. Recently, the efficiency of transanal endoscopic surgery, including transanal total mesorectal excision (TME), in rectal cancer surgery has been demonstrated [4, 5]. The technical advantages and better visualization that this approach affords may further facilitate better outcomes for patients with locally advanced rectal cancer.

In this video article, we present our transperineal APR synchronously assisted by a laparoscopic approach for advanced low rectal cancer with direct invasion of the posterior wall of the vagina.

The patient was a 67-year-old woman with a distal low rectal cancer that directly invaded the posterior vaginal wall. Computed tomography scan demonstrated lung metastases. Pathological analysis of the biopsy revealed a well-differentiated adenocarcinoma. The estimated clinical stage was T4bN2M1. We created a diverting sigmoid colostomy after which she had therapeutic chemotherapy with capecitabine and oxaliplatin (XELOX) plus bevacizumab. Following four cycles of systemic chemotherapy, the primary tumor remarkably downsized and the lung metastasis disappeared. However, the rectovaginal fistula persisted, and so, we planned radical surgery for the primary tumor. We then performed transperineal APR with posterior vaginal wall dissection combined with synchronous laparoscopic assistance to achieve complete TME with negative CRM. Total operative time was 240 min, with minimal blood loss. Macroscopically, the resected specimen showed that the primary tumor had dramatically reduced in size and had almost disappeared. Pathological findings revealed a well-differentiated adenocarcinoma in the vaginal mucosa, though the CRM was free of cancer cells. In addition, there was no lymph node metastasis; the pathological stage was ypT4b N0 M0. There were no intraoperative or postoperative complications.

In summary, a better transperineal visualization with synchronous laparoscopic assistance has facilitated division of the vaginal wall with adequate surgical margins from the invasion site. The advantages of this approach include better visualization of the surgical field from both laparoscopic and transperineal approaches with minimal perianal skin incision, keeping the surgical field airtight to maintain adequate pneumoperitoneum, and reduction of operative time and blood loss. This improved transperineal visualization with synchronously laparoscopic assistance may further facilitate improved oncological and functional outcomes.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical approval All procedures performed in this study were in accordance with the ethical standards of the institutional committee

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and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed consent Informed consent was obtained for the surgical procedure prior to their participation.

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