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Surgical Film

Modified posterior pelvic exenteration with pelvic side-wall resection requiring both intestinal and urinary reconstruction during surgery for ovarian cancer

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HIGHLIGHTS

- To achieve optimal cytoreduction for advanced ovarian cancer, MPPE is the most frequently performed bowel surgery.
- We report a technique for MPPE with pelvic side-wall resection requiring intestinal and urinary reconstruction.
- Pelvic tumors that had infiltrated the pelvic side-wall were safely and effectively removed using this surgical technique.

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ABSTRACT

Objective. Because of the anatomic proximity of the rectosigmoid to the female pelvic organs and its frequent involvement in ovarian cancer, an *en bloc* resection of ovarian tumors together with the uterus and rectosigmoid, also known as a modified posterior pelvic exenteration (MPPE), is frequently performed to achieve optimal cytoreduction [1]. Additionally, if the tumor has infiltrated the pelvic side-wall, a MPPE combined with pelvic side-wall resection can be selected [2]. We report the details of a technique for this surgery requiring intestinal and urinary reconstruction.

Methods. A 55-year-old woman underwent an up-front cytoreductive surgery for FIGO stage IIIC (pT3c N1 M0) ovarian cancer. Preoperatively, a tumor infiltrating the left pelvic side-wall was suspected; however, hydronephrosis of the left kidney was not observed on an enhanced computed tomography examination. During a laparotomy, tumor involvement of the left ureter and internal iliac vessels was observed; a MPPE with pelvic side-wall resection including a partial ureterectomy was thus performed. After the resection of the pelvic and omental tumors, colorectal and vesicoureteral anastomoses were performed.

Results. Histopathologically, a high-grade serous adenocarcinoma spreading into the muscular layer of the rectum, located close to the ureter and artery, and within 5 mm of the left pelvic side-wall was identified. Diet intake was started on postoperative day (POD) 3. The indwelling bladder catheter was removed on POD 10. Spontaneous voiding after surgery was sufficient and the volume of postvoid residual urine was noted to be <50 mL. The postoperative hospital stay was 12 days. No surgery-related complications occurred. Chemotherapy was initiated 3 weeks after the surgery. The ureteral stent was placed until 3 months after surgery.

Discussion. A MPPE requiring intestinal and urinary reconstruction is both feasible and safe and can be considered for patients with ovarian cancer involving the pelvic side-wall. Postoperative bladder function was preserved in this patient. However, difficulty in spontaneous voiding after surgery occurs and self-intermittent catheterization is necessary in some patients undergoing a MPPE combined with pelvic side-wall resection. In the previous study, we evaluated the impact of MPPE with or without nerve preservation on bladder function of the patients with ovarian and endometrial cancer [2]. All patients with bilateral nerve-sparing surgery had sufficient micturition from the early postoperative period. Though 40% of the patients with unilateral nerve-sparing surgery had difficulty in spontaneous voiding and needed intermittent catheterization, voiding ability of them improved and no self-catheterization was required 3 months after surgery. The assessment of patient questionnaires suggested that bladder function was acceptable in both groups at 6 months. Patients with bilateral nerve-sacrificing surgery complained of neurogenic bladder requiring self-catheterization even 6 months after surgery. Careful follow-up is required to assess bladder function after MPPE to the extent of pelvic autonomic nerve preservation.

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Author contribution

Kazuyoshi Kato and Makiko Omi performed the surgery. Kazuyoshi Kato wrote the manuscript and made the film with narration. Atsushi Fusegi collected the data in this article. Nobuhiro Takeshima reviewed the manuscript. All authors have approved the final manuscript and the film.

Declaration of Competing Interest

The authors declare that there are no conflicts of interest.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ygyno.2019.07.015.

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