Vessel-preserving en bloc adventitial excision of a bulky tumor involving the iliac artery

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In some cases of locally advanced ovarian cancer, iliac vessels are infiltrated or are tightly adhered. In particular, involvement of the external iliac vessels is a rare situation. These cases are mostly accepted as being inoperable and are referred for neoadjuvant chemotherapy. However, vessel resection and reconstruction with vascular grafts is feasible to obtain complete resection in such cases. Herein, we present a case of a 46-year-old woman admitted with abdominal pain. Pre-surgical examination revealed a fixed, solid-weighted adnexal mass suspicious for invasion to the adjacent structures. No further lesions were identified on pre-surgical imaging. At laparotomy, the right lower abdomen-pelvis was filled with a firm, fixed mass which involved the right abdominopelvic peritoneum, adnexa, uterus, terminal ileum, and caecum. The invaded bowels were detached from the mass, then right hemicolecotomy and ileocolic anastomosis were performed. Thereafter, en bloc resection of the main mass including total hysterectomy and salpingo-oophorectomy was carried out. The frozen section results revealed a primary endometrioid ovarian carcinoma. Right pelvic lymph nodes were conglomerated, tightly adhered to the iliac vessels, and conjoined with the rest of the mass, especially at the distal part towards the right femoral channel entry in a manner that did not allow identification of the vessels at this point. Moreover, the tumorous mass fully surrounded the external iliac artery and invaded its adventitial layer from the iliac bifurcation to the femoral channel entry.

Right lymph node dissection was started at a proximal level to identify the common iliac artery and vein first, and then the proximal parts of the external and internal iliac vessels. The formed bulky mass (conglomerated nodes and mass) was attached firmly to the iliac vessels. It was separated from the external iliac vein, internal iliac artery and vein with careful dissection using right-angle and cautery. Nevertheless, it was observed that the adventitial layer of the external iliac artery was tightly adhered and infiltrated. Therefore, a similar dissection method was not possible, and the mass was excised via stripping the adventitial layer of the artery. After completing the procedure, vascular surgery consultation was requested, and no further interventions were recommended. By means of this method the goal of “no macroscopic disease” was achieved without the need for arterial resection and vascular grafts. The surgical materials...
Video article
and instruments used are provided in Online Supplemental File 1.

Contributors GK, YC: performed the surgery. GK: wrote the article and prepared the video. YG: checked the artery condition intraoperatively. UKG, ABG, MAV: reviewed the article and video. GK, YC, YG, UKG, ABG, MAV: confirmed the final version of the article and video.
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