INTERNATIONAL JOURNAL OF GYNECOLOGICAL CANCER

How to simplify out-of-the-box surgery in recurrent gynecologic malignancies compromising iliac vessels: preoperative femorofemoral crossover bypass

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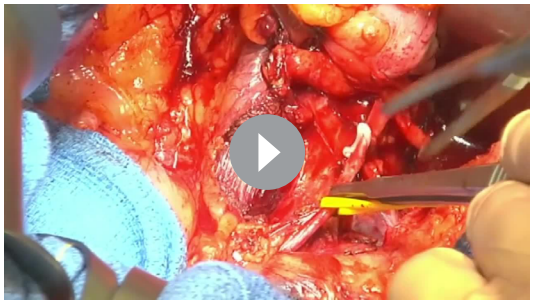
Accepted 8 April 2019

To cite: Martínez-Gómez C, Angeles MA, Saint-Lebes B, *et al*. *Int J Gynecol Cancer* Published Online First: [please include Day Month Year]. doi:10.1136/ijgc-2019-000393

Pelvic side wall recurrences represent a challenge for oncologic surgeons, especially in cases requiring major vascular resections. Until the description of the out-of-the-box lateral resection surgical technique, lateral pelvic wall involvement was considered a contraindication for surgery.[1 2] In order to achieve R0 margins, evolution of surgical procedures led to the resection of major vessels such as the external or common iliac arteries when these are compromised.[3] While vascular replacement is generally performed during exenterative surgery, we propose a novel approach by a dissociated surgical sequence where a crossover femorofemoral bypass is carried out 15 days before the resection.[4] The main strength of our schema is the reduction in the risk of prosthesis infection owing to a previous arterial bypass, deferred from tumor resection, which can include contaminated/dirty surgery due to bowel resection, over-infected tumors, or pre-existing enteric fistulas. In the case of prothesis infection, fatal limb loss may occur. This strategy also reduces intra-operative blood loss, operative time and avoids limb ischemia. Video 1 explains the step-by-step procedure in a patient diagnosed with an isolated iliac pelvic recurrence of a locally advanced cervical cancer, previously treated with chemoradiotherapy plus brachytherapy.

The first part of the procedure is to perform an extra-anatomic synthetic femorofemoral graft through a bilateral groin incision. The involved common iliac artery is then embolized and the common femoral artery is ligated up to the bypass in order to avoid reverse blood flow. Graft patency is controlled by contrast-enhanced computed tomography at day 7 and surgical resection of the recurrence can be achieved at day 15. Femoral vein replacement is not required as it is usually pre-operatively thrombosed by tumorous compression, hence collateral circulation already exists.

Between 2009 and 2018, this scheduled surgery was performed in a total of 11 patients (seven gynecological cancers and four primitive sarcomas). R0 resection was achieved in nine cases. Pelvic bone resection (acetabulum) was performed in the two remaining R1 cases, in whom intra-operative radiotherapy was pre-operatively planned. No vascular-related post-operative complications were observed and the grafts showed long-term patency. Our experience shows that this approach is feasible and reproducible, and simplifies out-of-the-box surgery compromising iliac vessels.



video 1. "Out of the box" laterally extended resection.

Contributors CM-G: Conceptualization, video editing, writing the original draft. MAA: Conceptualization, video editing, writing the original draft. BS-L: Conceptualization, project administration, surgery. FM: Conceptualization, review of draft. AM: Conceptualization, project administration, supervision, review of draft. GF: Conceptualization, project administration, surgery and video recording, supervision, review of draft.

Funding CM-G acknowledges the grant support from Alfonso Martín Escudero Foundation, Madrid (Spain).MAA acknowledges the grant support from "la Caixa" Foundation, Barcelona (Spain).

Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Commissioned; externally peer reviewed.

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