

Anterior pelvic exenteration with curative intent in locally invasive cervical cancer after initial bilateral hypogastric artery ligation

A case report

Abstract

Pelvic exenteration remains the only potential curative treatment for locally advanced gynaecologic tumors. It is however a demanding procedure for both surgeon and patient and still accompanied by considerable postoperative morbidity and decreasing but still important postoperative mortality. The patient therefore needs to reach prior to the procedure the best possible general status. We present the case of a 51 years old woman addressed to us in hemorrhagic shock caused by vaginal bleeding caused by an advanced cervical tumor. A bilateral hypogastric artery ligation was performed, which proved effective in achieving hemostasis and the patient was submitted to 26 sequences of irradiation. An anterior radical pelvic exenteration with curative intent was performed 6 months later.

Keywords: hemorrhagic shock, invasive cervical cancer, hypogastric artery ligation

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Introduction

For more than 6 decades, pelvic exenteration, which was for the first time reported by Brunschwig⁽¹⁾, remained the gold standard in treating primary advanced pelvic malignancies or recurrent pelvic tumors. The procedure was initially accompanied by important morbidity and mortality. In time, progress in surgical technique and especially in intensive care led to significant decrease in postoperative mortality and better understanding and management of the still frequent postoperative complications. Therefore, development of reconstructive techniques improved functionality and body image after this highly invasive procedure⁽²⁾.

Case report

We report the case of a 51 years old woman who was hospitalised in emergency for haemorrhagic shock due to severe vaginal bleeding. The local vaginal examination showed an active bleeding from a large cervical mass, invading the posterior wall of the bladder. The computed tomography (CT) scan confirmed the diagnosis of locally advanced cervical cancer and also revealed a grade III left uretero-hydronephrosis. Because of the alteration of the general condition associated with hypotension an emergency laparotomy was performed, and both hypogastric arteries were ligated. The method proved effective in achieving hemostasis and the patient's general status improved over the next

week. Once stabilization was achieved a right nephrostomy mass placed percutaneously. Tumoral biopsies were taken and the results revealed a medium differentiated non-keratinised squamous cell carcinoma. The patient was released in the eleven postoperative day with good biological constants (Hb=10 g/dl) and 600 ml of urine/day on the nephrostomy tube. Later she underwent 26 sequences of external beam radiotherapy and 2 sequences of brachytherapy. After another six months later she returned in our service for oncologic reevaluation. The cervical tumor slightly decreased in volume and urinary bladder invasion was reevaluated by cystoscopy which confirmed breaching of the mucosa.

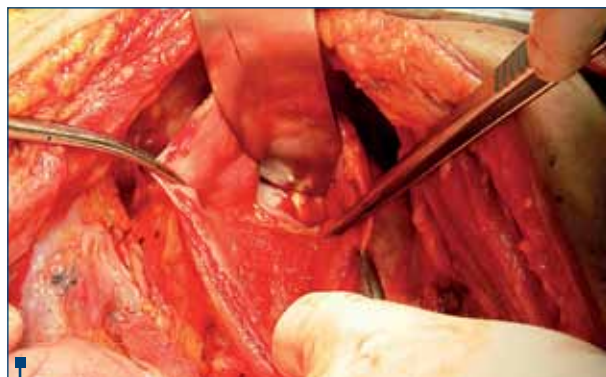


Figure 1. Tumoral invasion in the posterior wall of the bladder

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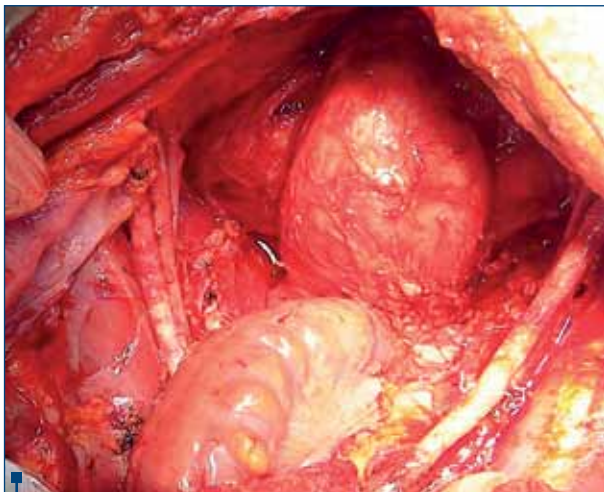


Figure 2. The final aspect of the pelvis after resection and complete lymph node dissection

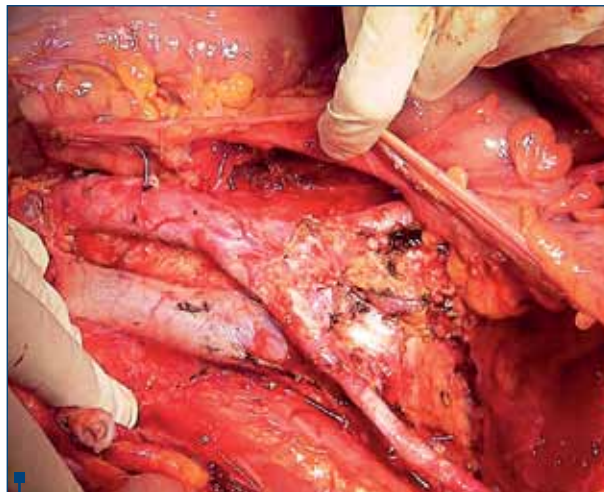


Figure 3. The final aspect of the inter-aortico-caval lymph node dissection



Figure 4. The two ureters are dissected from the post-irradiated fibrotic tissues

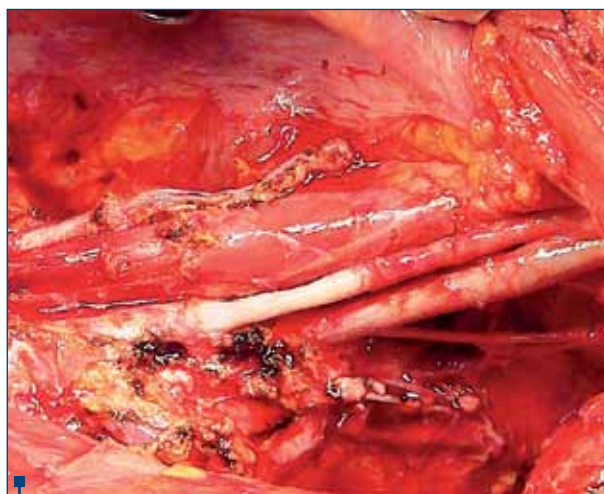


Figure 5. The aspect of the obturator fossa after lymph node dissection



Figure 6. The two external arteries and veins are completely dissected



Figure 7. The specimen: total hysterectomy with bilateral adnexectomy and total cystectomy

No distant metastases were detected by thoracic and pelviabdominal CT scan and decision to perform radical intent surgery was taken. An anterior pelvic exenteration with inter-aortico-caval and pelvic lymph node dissection was performed. The intraoperative findings confirmed the preoperative assessment and showed an important post-irradiation retroperitoneal fibrosis and the deterioration of the anatomic structures. For this reason the initial intent to perform a bladder reconstruction was dropped and the right nephrostomy was maintained with a left cutaneous ureterostomy performed (Figures 1-7). The postoperative evolution was uneventful; the patient was discharged in the 20th postoperative day. Furthermore, due to retroperitoneal fibrosis a tactical resection of the mesosigmoid had to be performed which led to devascularisation of the left colon, solved by a tactical colorectal resection with colorectal anastomosis.

Discussion

Massive vaginal bleeding is a difficult problem which can appear during the management of cervical cancer that the gynecologists have to deal with. It can increase morbidity by severe anemia and hemorrhagic shock. Due to these general hemodynamic modifications a curative surgery might not be feasible as primary in-

attention and special procedures have to be achieved in order to prepare a late intervention with curative visa⁽³⁾. If the local haemostatic treatment associated with intravenous administration of fitomenadione or adrenostasine is not efficient in stopping the bleeding, a more aggressive intervention is needed. In this cases ligation of hypogastric artery, either unilateral or bilateral can be performed with good results, the reported success rate ranging between 40-100% in various studies⁽²⁻⁸⁾. This approach also prepares the patient for the next steps in the management of locally advanced cervical cancer, radiation therapy and surgery⁽⁹⁾. In our case, once the hemostasis was achieved and the left ureterohydronephrosis was managed by placing a nephrostomy, the biological constants of the patient returned to normal and the general status improved, and the patient was submitted to irradiation(1-5). Radiotherapy is a standard procedure in the management of gynecologic malignancies⁽¹⁰⁻¹⁵⁾.

Conclusions

Bilateral hypogastric artery ligation is an effective procedure in controlling bleeding from cervical tumors. It can be employed as a first step procedure preparing the path for neoadjuvant therapy in order to achieve decrease of tumor burden prior to radical visa surgery. ■

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