

## Case Report

# Posterior Pelvic Exenteration for Atypical Recurrence after Surgically Treated and Irradiated Endometrial Cancer

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## REZUMAT

### *Exenterație pelvină posterioară pentru recidivă atipică de neoplasm endometrial operat radiotratat*

Neoplasmul endometrial este o malignitate comună a tractului ginecologic asociată de obicei cu un prognostic bun. Cu toate acestea, în momentul apariției recurenței, rata mortalității crește semnificativ. În primii trei ani de la diagnosticul inițial cele mai multe cazuri care dezvoltă recurență au de fapt recidive pelvine cu punct de plecare la nivelul bontului vaginal. În aceste cazuri cea mai eficientă metodă de a îmbunătăți supraviețuirea rămâne tratamentul chirurgical. Prezentăm cazul unei pacientede 66 ani care fusese inițial operată pentru un adenocarcinom endometrial slab diferențiat urmat de radioterapie adjuvantă; la un an după încheierea tratamentului oncologic adjuvant pacienta s-a prezentat pentru sângerări vaginale abundente și a fost diagnosticată cu o recidivă de bont vaginal invazivă în peretele rectal și hemivulva stângă pentru care s-a practicat exenterație posterioară. La șase luni postoperator pacienta nu prezintă semne de recurență.

**Cuvinte cheie:** adenocarcinom endometrial, recurență perineală, iradiere, exenterație posterioară.

## ABSTRACT

Endometrial carcinoma is a common gynaecologic malignancy usually associated with good prognosis. However, when recurrence develops the mortality rate significantly increases. During the first three years after initial diagnosis most cases who develop recurrence of the disease present pelvic relapse originating from the vaginal cuff. In these cases the most efficient approach in order to increase survival remains surgery. We present the case of a 66-year-old patient who had been previously submitted for surgery for a poorly differentiated endometrial adenocarcinoma followed by adjuvant radiation therapy; one year after ending the adjuvant treatment the patient presented for severe vaginal bleeding and was diagnosed with a vaginal wall recurrence invading the rectal wall and the left hemivulva, so a posterior exenteration was performed. After six months postoperatively she presents no signs of recurrent disease.

**Key words:** endometrial adenocarcinoma, perineal recurrence, irradiation, posterior exenteration

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## INTRODUCTION

Endometrial carcinoma is the fifth most common malignancy in women worldwide and the most common gynaecologic cancer in developed countries, being associated with increased fat consumption, obesity and exposure to unopposed estrogens (1,2,3). Endometrial cancer is usually diagnosed in an early stage of the disease; up to 75% of cases are diagnosed in stage I of the disease and are associated with good long term prognosis. Unfortunately, it is estimated that in time 13 % of cases diagnosed with endometrial cancer will develop recurrence, in these cases the mortality rate being up to 25% (4,5). Once the recurrent disease is diagnosed, the main therapeutic options include chemotherapy for distant or widely metastatic recurrence, radiotherapy for small, isolated pelvic recurrences especially if the patient had not been submitted to radiation therapy previously and resection for cases presenting localized centro-pelvic recurrence (6-8). However, most patients experiencing pelvic recurrence within the first three years after the initial diagnosis are diagnosed with vaginal vault relapse, in these cases total colectomy or even pelvic exenteration being required (7,9,10).

## CASE REPORT

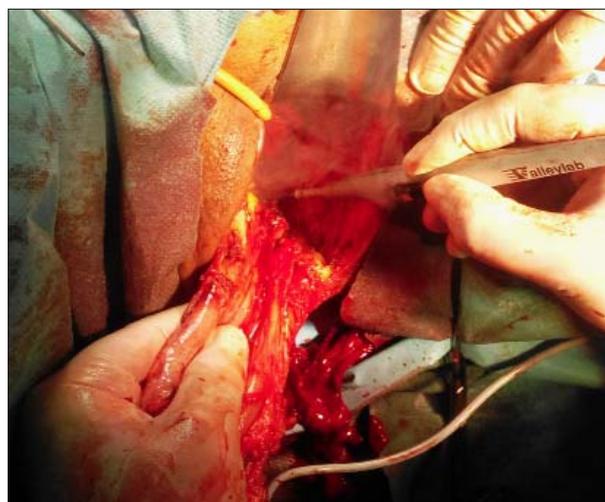
A 66-year-old patient had been diagnosed with endometrial adenocarcinoma two years previously. At that point a total hysterectomy with bilateral adnexectomy and pelvic lymph node dissection had been performed. At that moment the histopathological examination revealed a stage IIIA poorly differentiated endometrial adenocarcinoma so the patient was submitted to adjuvant radiation therapy. One year later the patient presented for severe vaginal bleeding, constipation and pelvic pain. The local examination revealed the presence of a tumoral mass which has developed in the vaginal wall and in the left hemi-vulva and invaded the rectum (**Fig. 1**). The biopsy confirmed the presence of a poorly differentiated endometrial adenocarcinoma while the pelvic MRI revealed an invasion area in the anterior rectal wall. Due to the fact that the patient had a massive vaginal bleeding with hemodynamic impact she was submitted to surgery, a posterior pelvic exenteration being performed (**Fig. 2, 3**). At the six month follow up the patient is free of recurrent disease.

## DISCUSSION

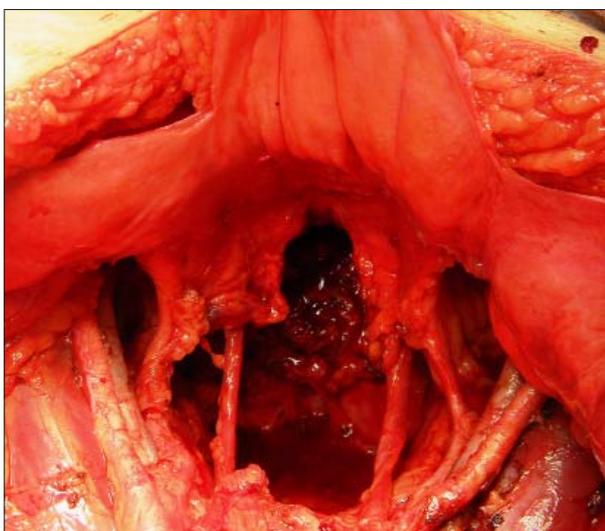
Important prognostic factors impacting on the overall survival in women diagnosed with relapsed endometrial cancer include the site of relapse, disease free survival, histological subtype and the previous administrated treatment (8). It has been widely demonstrated that the association of a longer disease-free survival interval, isolated vaginal relapse and a lower grade of endometrial



**Figure 1.** The initial aspect: perineal hemorrhagic recurrence invading the rectum



**Figure 2.** Mobilization of the recurrence en bloc with the rectum



**Figure 3.** The final aspect after posterior exenteration

adenocarcinoma are usually associated with an improved outcome (8,11). In cases presenting an isolated vaginal relapse, radiation therapy might be the treatment of choice especially in cases who had not been previously submitted to pelvic irradiation (8) while patients who had undergone adjuvant radiation therapy are especially susceptible to severe side effects, especially in the gastrointestinal tract, so other therapeutic strategies should be taken in consideration (8,12). The eventuality of a local pelvic recurrence after surgically treated and irradiated endometrial adenocarcinoma is rarely seen (7,8,9). In the study conducted by Ferenschild et al. involving 69 patients with pelvic malignancies in whom pelvic exenteration was performed, a single patient was submitted to this ultra-radical surgical procedure for recurrent endometrial cancer (13).

Although it has been considered that pelvic exenteration is associated with high postoperative rates of morbidity and even mortality (ranging between 10-15%), 5 year survival rates of 40% after recurrence resection have been achieved; this fact enabling the surgeons to consider that pelvic exenteration is the only potential curative solution in patients with isolated, centro-pelvic recurrences after surgically treated and irradiated endometrial adenocarcinoma (7). In the study conducted by Barakat et al. in 1999 the authors introduced 44 patients submitted to pelvic exenteration for recurrent endometrial cancer. The mean age was 60 (range 35-69 years) while the initial treatment consisted of total hysterectomy with bilateral adnexectomy in all cases. At the time of the resection for relapsed disease 23 patients were submitted to total exenteration, 20 cases were submitted to anterior exenteration while posterior exenteration was performed in a single case. Although major postoperative complications were seen in up to 80% of cases and the median survival for the entire group was 10,2 months, nine patients (20%) achieved long term survival (>5 years) demonstrating that in selected cases a significant benefit in terms of survival can be achieved (7).

In 2014, the Society of Gynecologic Oncology's Clinical Practice Committee has reviewed the literature and created evidence-based practice recommendations for diagnosis and treatment. When it came to the subject of pelvic recurrences in irradiated patients the committee established that pelvic exenteration offers the only curative option in these cases (level of evidence: C) (14).

In our case one of the most important aspects was represented by the atypical localization of the recurrent tumor: at the level of the distal vagina and the left hemivulva, invading the rectum. This atypical localization associated with the active bleeding at the time of presentation and the previous history of adjuvant radiation therapy made us perform a posterior exenteration.

Some studies proposed in similar cases a conservative treatment based on external beam radiation therapy or combined with brachytherapy. In the study conducted by Jhingran et al. involving 91 patients diagnosed with isolat-

ed vaginal recurrences of endometrial carcinoma after hysterectomy, external beam radiation therapy and brachytherapy were proposed with radical intent. After applying a median dose of radiation of 75 Gy (range 34-122) the 5 year overall survival rate was 43%, with significantly improved outcomes after combining brachytherapy and external beam radiation therapy. The authors demonstrated the benefits of combining the two modalities of irradiation in order to achieve a local control; however distant metastases still developed, the distant recurrent tumours being responsible in most of the cases for the patient's death (15). More over, in our case a conservative management consisting of vaginal brachytherapy or external beam radiation therapy could not be applied due to the recent history of adjuvant radiotherapy of the patient.

In Campagnutta's study the authors included 75 patients with abdominal and pelvic recurrences who were submitted to debulking surgery. Recurrence was defined as the re-appearance of a tumor at least three months after ending the primary therapy. Other inclusion criteria referred to the presence of abdominal wall, inguinal or vulvar involvement, central pelvic-vaginal relapse measuring more than 4 cm with lateral side-wall extension, a good general status and the absence of distant metastases. The radicalism of the surgical approach was measured according to the residual disease as follows: R0 – no visible residual disease, R1- residual disease lesser than 1 cm and R2 – residual disease larger than 1 cm. Among the 75 cases, 20% of them were diagnosed with central pelvic-vaginal recurrence while in other 13,3% pelvic recurrences were found; in the other 66,7% of the cases abdominal or abdominopelvic recurrences were seen. In 20% of cases resection was limited to colectomy, in 16% of cases a posterior exenteration was performed while anterior exenteration was needed in a single case. More extended surgical procedures such as retroperitoneal lymphadenectomy, peritoneal stripping or liver resection were performed in 40%, 21% and respectively 7%. Complications occurred in 23 cases, the most serious consisting of intraoperative haemorrhage in 5% of cases, postoperative bleeding in 4% of cases, enteral fistula in 6% of cases, urinary fistula in 4% of cases and pulmonary embolism in 5% of cases; a single postoperative death was reported. A complete macroscopic resection was achieved in 64% of cases while an R1 resection was obtained in 10,7% of cases. When studying the long term outcomes, a median cumulative survival after debulking surgery of 19 months was reported, five cases being alive 60 months after surgery for relapse; however the median overall survival was significantly higher among patients who benefited from complete cytoreductive surgery when compared to those with residual disease (53 months versus 9 months,  $p < 0,05$ ). In the Cox model residual disease, chemotherapy after debulking surgery and central pelvic-vaginal recurrence were significantly associated with improved survival. The authors also demonstrated that among the cases submitted to complete macroscopic resec-

tion the presence of an isolated pelvic-vaginal recurrence represented a good prognostic factor, although at long term follow up this fact did not significantly impacted on survival (16).

### CONCLUSIONS

Isolated pelvi-perineal recurrence after endometrial carcinoma is a rare event which seems to be best managed by a radical surgical approach. In most cases a total or partial pelvic exenteration is needed in order to obtain a good local control of the disease. Although initially it has been considered that exenteration is an excessively aggressive surgical procedure associated with unacceptable rates of postoperative complications, improvement of the intraoperative technique and postoperative management of these patients led to an increase in the rate of long term survivors. In the meantime other proposed procedures such as external beam radiation therapy or an association of external radiotherapy and brachytherapy are limited by the previous administrated doses of irradiation and failed to demonstrate the efficacy in order to prevent systemic extension of the disease. In our case the most important aspect consisted in the atypical localization of the recurrence and in its' solitary character which transformed it into the perfect case for radical surgery.

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