

# Total pelvic exenteration for recurrent uterine malignancies – a case series

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## ABSTRACT

Pelvic exenteration has been proposed in order to treat locally advanced or relapsed pelvic malignancies with different origins such as digestive, urological or gynecological cancers. However it seems that cases diagnosed with relapsed uterine malignancies are rarely candidates for extended pelvic resections, most cases presenting disseminated lesions at the time of relapse. The aim of the current paper is to report a case series of five patients diagnosed with pelvic recurrences after surgically treated uterine cancer who were submitted to extended pelvic resections with curative intent between August and December 2021. The histopathological studies demonstrated the presence of negative resection margins in two cases. The postoperative outcome was favorable in three cases, one case necessitated prolonged intensive care stay while the last one necessitated reoperation due to the presence of a pelvic abscess. However all patients were discharged within the first three weeks postoperatively. In conclusion, pelvic exenteration can be successfully performed in selected cases diagnosed with pelvic recurrences after surgically treated uterine cancer.

**Keywords:** total pelvic exenteration, uterine malignancies, recurrence

## INTRODUCTION

Pelvic exenteration was initially proposed with palliative purposes for locally advanced pelvic malignancies such as rectal or cervical cancer or for local recurrences with different origins [1]. However, after performing such procedures, even if they were performed with palliative purpose, an increase of the life expectancy was reported as well as an improvement of the quality of life. Therefore the procedure has been submitted to permanent improvement and has been also proposed with curative intent for primary locally invasive or recurrent pelvic tumors [2]. When it comes to cases diagnosed with recurrent uterine tumors, the number of patients which are

considered as candidates for these procedures are relatively low especially due to the fact that they usually recur not only at the level of the pelvic cavity but also at the level of the peritoneum as peritoneal carcinomatosis (in cases of endometrial cancer) or at distant sites (in cases of sarcomas) [3].

The aim of the current paper is to present a case series of five patients diagnosed with pelvic recurrences after surgically treated uterine cancer between August and December 2021.

## MATERIAL AND METHODS

Between August and December 2022 five patients diagnosed with pelvic recurrences after surgi-

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cally treated uterine cancer were submitted to surgery with curative intent. Data of patients were retrospectively reviewed after receiving the approval of the Ethics Committee no 5/2022.

## RESULTS

The mean age at the time of recurrence was of 53 years (range 48-63 years) while the median disease free survival from the initial diagnostic was of 18 months (range 11-32 months). The initial diagnostic was of endometrial adenocarcinoma in two cases and uterine sarcoma in three cases: one endometrial sarcoma and two cases of leiomyosarcoma. In all cases surgery with curative intent was tempted, the negativity of the resection margins being reported in three of the five cases; one case with leiomyosarcomas and the case diagnosed with endometrial sarcoma presented tumoral invasion of the resection margins. The mean operative time was of 210 minutes (range 180-300 minutes) while the mean estimated blood loss was of 800 ml (range 500-1300 ml). In all cases a total pelvic exenteration was performed, the left colon being exteriorized in left colostomy while the two ureters were exteriorized through right urostomy. Postoperatively all cases were deferred to the oncology service in order to be submitted to adjuvant oncological treatment. The mean hospital in stay was of 12 days (ranging 6-21 days) reoperation being needed in a single case in which a pelvic abscess developed; another patient necessitated a prolonged intensive care in stay of 14 days due to the fact that she developed a pneumonia postoperatively. However, all patients were discharged in a good clinical condition.

## DISCUSSIONS

Differently to other types of malignancies, uterine cancer usually develops both local and distant metastases via peritoneal spread (in cases diagnosed with endometrial carcinomas) or via hematogenous route leading to the development of distant metastases (in cases diagnosed with uterine sarcomas) [3,4]. In cases in which isolated, small in size pelvic recurrences occur, the first intent therapy might consist of radiation therapy; on the other size, larger recurrences as well as the previous history of pelvic irradiation transform surgery into the only potential chance for cure in such cases [5,6].

In order to identify which are most suitable for performing such procedures, Seagle et al. conducted a study on 1160 patients diagnosed with uterine cancer submitted to surgery between 1998-2011 at Prentice Women's Hospital, Chicago; the authors underlined the fact that women with node positive disease, distant metastases, positive resection margins

and those who necessitated association with radiation therapy had a significantly poorer long term outcomes and higher risk of cancer related death [7].

An interesting study which aimed to demonstrate the safety of pelvic exenteration in cases diagnosed with gynecological cancers and to identify the most relevant prognostic factors has been conducted by Baiocchi et al., and included 107 patients submitted to surgery between 1982 and 2010. Among these cases there were 73 cases diagnosed with uterine cervix cancer, 14 cases diagnosed with endometrial cancer, 10 cases with vaginal cancer, 7 cases with vulvar cancer and 3 cases diagnosed with uterine sarcoma. The authors demonstrated that one of the most important prognostic factors in terms of survival in such cases is represented by the origin of the tumor, endometrial cancer being associated with better five year overall survival than cervical cancer. Other prognostic factors were represented by the presence of lymph node metastases, perineural invasion and invasion of more than three organs; surprisingly, the dimensions of the tumor, progression free survival interval and positive resection margins did not significantly influenced the overall survival [8].

Another study which came to demonstrate the efficiency of pelvic exenteration in endometrial cancer when compared to other malignancies has been conducted by Maggioni et al. and included 106 consecutive patients submitted to this procedure; the authors underlined the fact that the disease specific overall survival was of 35% in endometrial cancer, while in cases with vulvar or vaginal cancer was of only 16% and respectively 19%; however, the authors underlined the fact that not all patients with endometrial cancer recurrences should be submitted to surgery, important factors influencing this decision being related to the biology of the tumor [9].

## CONCLUSIONS

Although total pelvic exenteration remains a very risky procedure, associated with significant rates of postoperative morbidity and mortality, a significant benefit of survival might be expected in certain cases. When it comes to pelvic exenteration for uterine recurrent tumors, the number of cases considered as candidates for such radical procedures are diminished due to the presence of distant hematogenous or peritoneal metastases. However, in cases in which isolated pelvic lesions are encountered surgery might be tempted especially if negative resection margins are achievable. Meanwhile, it should not be omitted the fact that among all gynecological malignancies, endometrial cancer recurrences are associated with the best results in terms of survival, demonstrating once again the effectiveness of pelvic exenteration in such cases.

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**REFERENCES**

1. Brunschwig A. Complete excision of pelvic viscera for advanced carcinoma; a onestage abdominoperineal operation with end colostomy and bilateral ureteral implantation into the colon above the colostomy. *Cancer*. 1948 Jul;1(2):177–183.
2. Höckel M. Laterally extended endopelvic resection (LEER)—principles and practice. *Gynecol Oncol*. 2008;111(2):13–17.
3. Khoury-Collado F, Heather Einstein M, Bochner BH et al. Pelvic exenteration with curative intent for recurrent uterine malignancies. *Gynecol Oncol*. 2012;124:42–47.
4. Barakat RR, Goldman NA, Patel DA et al. Pelvic exenteration for recurrent endometrial cancer. *Gynecol Oncol*. 1999;75(1):99–102.
5. Huh WK, Straughn Jr JM, Mariani A et al. Salvage of isolated vaginal recurrences in women with surgical stage I endometrial cancer: a multi-institutional experience. *Int J Gynecol Cancer*. 2007;17(4):886–889.
6. Aghajanian C, Sill MW, Darcy KM et al. Phase II trial of bevacizumab in recurrent or persistent endometrial cancer: a Gynecologic Oncology Group Study. *J Clin Oncol*. 2011;29(16):2259–2265.
7. Seagle BLL, Dayno M, Strohl AE et al. Survival after pelvic exenteration for uterine malignancy: A National Cancer Data Base study. *Gynecol Oncol*. 2016;143:472–478.
8. Baiocchi G, Guimaraes GC, Rosa Oliveira RA et al. Prognostic factors in pelvic exenteration for gynecological malignancies. *EJSO* 2012;38:948-954.
9. Maggioni A, Roviglione G, Landoni F et al. Pelvic exenteration: Ten-year experience at the European Institute of Oncology in Milan. *Gynecol Oncol*. 2009;114:64–68.

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