

Palliative Pelvic Exenteration for Pelvic Recurrence Invading the Sciatic Foramen with Chronic Cutaneous Perineal Fistula after Radical Surgery for Cervical Cancer: A Case Report

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Abstract. *Pelvic exenteration remains one of the most aggressive gynecological surgical procedures performed for patients with locally-invasive cervical cancer, usually performed with curative intent. However, there exist patients who present in a very advanced stage of the disease, in which only a palliative surgical procedure can be performed. Although in these cases the survival benefit is minimal, performing a pelvic exenteration significantly improves the quality of life. We present the case of a 63-year-old female who was submitted to palliative pelvic exenteration for a locally invasive recurrence in the left sciatic foramen after surgically-treated cervical cancer.*

Since Brunschwig reported it for the first time, pelvic exenteration remained the gold-standard in treating locally advanced cervical cancer or pelvic recurrences (1). Due to improvements of surgical technique and of the postoperative management, pelvic exenteration became rather a curative surgical procedure. However, unfortunately some patients present at an advanced stage of the disease when only a palliative procedure can be performed.

Case report

A 63-year-old female underwent total radical hysterectomy with bilateral adnexectomy for pre-irradiated cervical cancer four years previously. The histopathological examination revealed a moderately-differentiated squamous cell carcinoma. The postoperative evolution was uneventful with no signs of local recurrence or distant metastases at the 3

year follow up. Ten months after the last follow-up the patient presented for pelvic pain associated with the apparition of a gluteal fistula orifice. The imagistic exams revealed a pelvic recurrence invading the rectum, the left sciatic foramen, the posterior wall of the urinary bladder (Figure 1) and the subcutaneous perineal tissues developing a cutaneous perineal fistula (Figure 2). At that time surgery was limited to a lateral sigmoidian colostomy. Unfortunately, the postoperative evolution was rather unfavorable with the persistence of fistula flow associated with subfebrility so we decided to re-operate the patient. A posterior palliative exenteration with partial cystectomy was performed with remnant tissue at the level of the left sciatic foramen and sacral bone (Figures 3-7). This palliative procedure provided a good local control of the disease by removing the necrosed and abscessed tumor, interrupting the fistula line and offering an amelioration of the debilitating pain.

Discussion

Pelvic exenteration was first reported by Alexander Brunschwig in 1948 and was designed at the moment as a palliative surgical procedure. The main indications were to treat bulky pelvic tumors associated with disabling symptoms such as pelvic pain, bleeding or fistulas which were in fact results of an uncontrolled local growth of an aggressive malignancy (1, 2). Initially, the first results in terms of survival were rather discouraging with a perioperative mortality of almost 33% and an important morbidity associated with a long and difficult postoperative recovery. However the benefits of the procedure as a palliative one was very clearly expressed by Brunschwig himself: "Because of the advanced stage of their disease, it is not to be anticipated that many, if any, of these patients will survive for very prolonged periods....On the other hand, of those surviving at this writing, not one has expressed the feeling that they would have preferred to have remained as they were and not to have had the operation" (1, 2).

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Initially palliative pelvic exenteration was addressed to those cases with severe radiation necrosis; other possible indications included the presence of intractable hemorrhage or debilitating fistulas (3, 4).

In the next few decades association of neo-adjuvant oncologic therapy increased the number of pelvic exenterations with curative intent. However there were still patients in whom curative surgery was no longer feasible due to the local invasion or due to the presence of distant metastases but in whom tumor related symptoms were disabling. Due to the high risk of postoperative complications associated with the lack of benefit in terms of overall survival, indication of palliative exenteration remained a matter of debate for long time. While some authors come to sustain its benefits in order to alleviate symptoms (2, 5, 6), other authors do not believe that palliative pelvic exenteration can provide any improvement of quality of life (7-9).

The notion of palliative exenteration refers in fact at three situations: the first one is when preoperatively the patient is known to have both local pelvic disease and distant metastases and palliative pelvic exenteration is performed only to assess a good local relief of symptoms; in the second case the tumor seems to be perfectly resectable on the preoperative exams but intraoperatively local invasion of the bone, common iliac artery or sciatic foramen are found; in these cases palliative surgery is performed with minimal-residual disease. Kuhrt's study which included 53 patients submitted to pelvic exenteration for recurrent colorectal or gynecological cancers illustrates best this situation: although a radical resection was initially attempted in all cases, at the end of surgery in seven cases an R2 resection was performed, with grossly pelvic residual disease due to the local invasion discovered intraoperatively. However, in all seven cases palliation purpose was successfully achieved and surgery alleviated symptoms like colovesical or enterovesical fistulas with chronic urinary tract infections, colovaginal fistulas, and chronic pelvic or perineal pain (10). The third category included in the notion of palliative exenteration is represented by the cases in which recurrence appears after an initial radical surgery for early stage pelvic malignancies (2).

An adequate selection of patients amenable to palliative exenteration is also a mandatory step; patients' selection should be based on the severity of symptoms, the presence of distant metastases, the patients' psychological status and the anticipated life-expectancy (11, 12). Patients who present large distant metastases usually have an overall poor prognosis with difficult recovery after surgery and short life expectancy; these are the cases that rather do not benefit from the advantages of palliative exenteration and die before experiencing any improve of the quality of life (2).

Another selection criterion which is mandatory in order to achieve a good control of the debilitating pain is the origin of the pain. For example in cases presenting local invasive

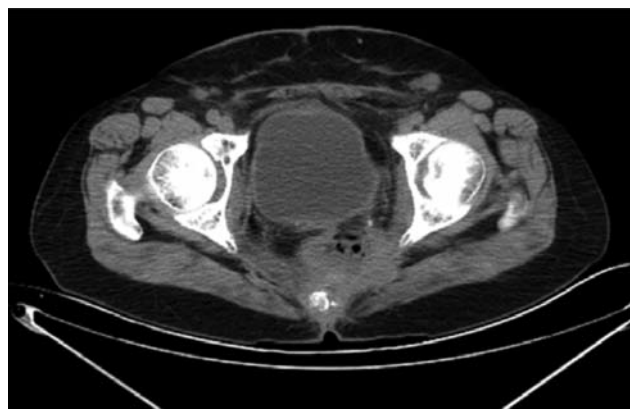


Figure 1. Large pelvic recurrence invading the left sciatic foramen.



Figure 2. Cutaneous perineal fistula.

pelvic tumors the debilitating pain might have more origins: a peri-tumoral abscess and a secondary local septic foci, tenesmus or radicular pain due to a nervous invasion which might develop. Performing a palliative procedure will provide benefits only in the first two cases (by removing the

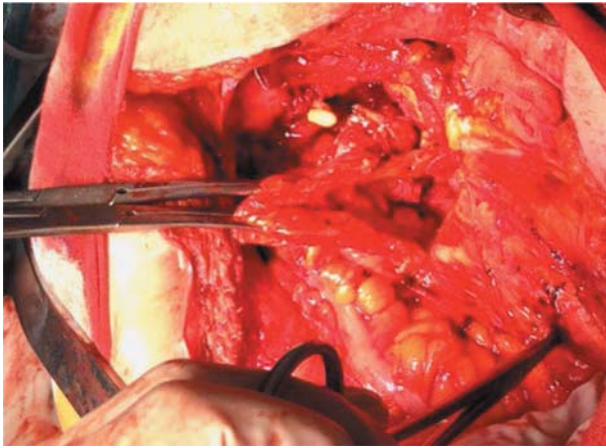


Figure 3. The pelvic recurrence is resected en bloc with partial cystectomy and the left colon.

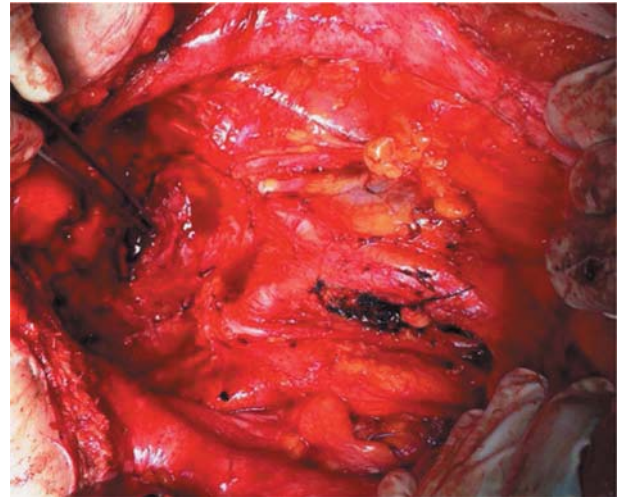


Figure 5. Remnant tumoral tissue invading the sacral bone.

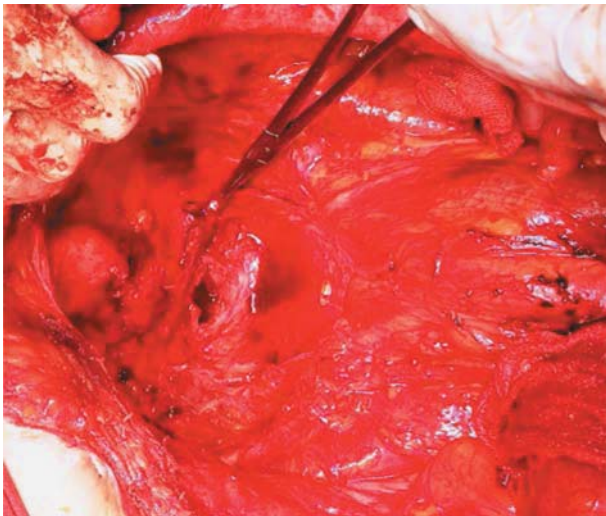


Figure 4. The final aspect after resection.

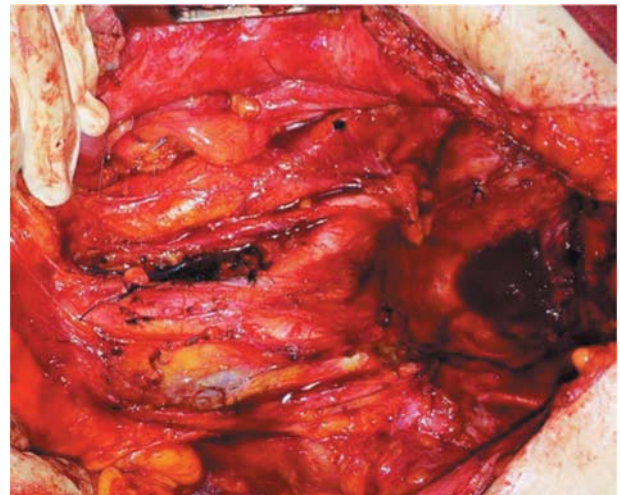


Figure 6. The final aspect after posterior exenteration.

abscessed tumor and destroying the local sepsis foci) while the radicular pain most probably won't be influenced by surgery. However even in these cases a minimal palliation effect might be obtained due to resection of the gross pelvic tumor mass (11, 12, 13).

When it comes to the efficiency of this procedure, various results have been reported by different studies. For example, in Yeung's study involving patients submitted to palliative pelvic exenteration for recurrent rectal cancer, pain palliation was achieved in 67% of patients while in a similar study conducted by Brophy *et al.* in the Fox Chase Cancer Center almost 88% of cases experienced an improvement of the quality of life after palliative pelvic

exenteration (14, 15). In Brophy's study palliative exenteration was performed in 35 patients, the main symptoms imposing palliative pelvic exenteration including pain (12 cases), bleeding (11 cases), fistula (7 cases), or obstruction (6 cases) which were present for a median duration of 12 months before surgery. The main performed surgical procedures included 11 total, 13 anterior, and 11 posterior exenterations, with 17 extended resections, with a reported mortality was 3% and an overall morbidity of 47%. The quality of life improved in 88% of cases while the long-term follow-up revealed a median overall survival of 20 months, and 43% of patients were still alive after a minimum of 16 months of follow-up (16).

Puntambekar *et al.* conducted a study on 7 patients submitted to laparoscopic palliative pelvic exenteration and reported that no unanticipated morbidity and no postoperative mortality occurred. When it comes to long-term outcomes the authors reported that after a mean period of follow-up of 11 months, the mean symptom free period was 8 months. The same study reported that while four patients died by secondary distant metastases three other patients had a disease-free survival interval longer than one year (17).

Conclusion

Patients submitted to pelvic exenteration with palliative intent report improved quality of life with decreased requirement of narcotic drugs and decreased amounts of malodorous discharge (4, 18).

However, cases in which this surgical procedure is done with palliative intent should be carefully selected in order to obtain an improved quality of life without increasing the postoperative morbidity. When it comes to long-term survival, even in cases in which an important amelioration of symptoms is achieved, the survival benefits remain minimum (2).

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