

Total pelvic exenteration for pre-chemio-irradiated local invasive necrosed cervical tumor. A case report

Abstract

Although association of neo-adjuvant therapies in the standard therapeutic protocol of treating local advanced cervical cancer significantly improved the local control of the disease there are still cases in which total pelvic exenteration is needed. We present the case of a 46 years old patient diagnosed with a locally invasive cervical tumor in which neo-adjuvant treatment was performed, then the patient was submitted to surgery. A total pelvic exenteration with pelvic and para-aortic lymph node dissection was achieved.

Keywords: neo-adjuvant treatment, local invasion, total pelvic exenteration

Introduction

Cervical cancer remains an important problem of health worldwide, being associated with a high number of deaths annually⁽¹⁾. Although association of neo-adjuvant therapies improved the local control of this aggressive malignancy, persistence of invasion of the surrounding viscera at the moment of surgery is not an uncommon finding, forcing the surgeon to proceed at en bloc multivisceral resections^(2,3).

Case report

A 46 year old patient presented for pelvic pain, dysuria and constipation associated with methroragies. The local examination revealed a bulky cervical tumor invading the urinary bladder and the rectum. A biopsy was performed and showed the presence of a poor differentiated squamous cell cervical tumor. The patient was confined to the Oncology Clinic where neo-adjuvant chemo-irradiation was performed. At the end of the oncological treatment a pelvic magnetic resonance imaging was performed and showed a slight regression of the tumor, with the persistence of the bulky tumor measuring 54/36 mm invading the posterior wall of the bladder and the anterior wall of the rectum. We decided to perform a total exenteration with pelvic and para-aortic lymph node dissection, right ureterostomy and left colostomy (Figures 1, 2 and 3). The postoperative course was uneventful.

Discussion

Cervical cancer represents a gynecologic malignancy with an aggressive biological behaviour which has the capacity to destroy the local barriers, true natural compartmental borders and invade the surrounding viscera, anteriorly the urinary bladder and posteriorly the rectum. Neither one of these invasions represent criteria of unresectable tumor, the most appropriate intervention to treat cases like this being pelvic exenteration^(2,3). Although it is one of the most destructive surgical procedures which significantly impacts on the quality of life, it is the only potential curative solution for

an important number of patients⁽⁴⁾. Once the postoperative morbidity and mortality increased, large studies have focused on establishing which are the main prognostic factors associated with good long term results.

Forner and contributors retrospectively reviewed data from 35 patients diagnosed with locally advanced cervical cancer who were submitted to pelvic exenteration. The main surgical procedures were anterior exenteration (17 cases), posterior exenteration (2 cases) and total exenteration (16 cases). In 14 cases positive pelvic lymph nodes were found, while association of positive pelvic and para-aortic lymph node metastases was seen in 6 cases, with no skip metastases. A complete R0 resection was feasible in 30 cases, while R1 and R2 resections were performed in the other 5 cases. During the postoperative course 8 patients necessitated re-operation due to the apparition of urinary or digestive fistulas. Median disease free survival was 20 months while 5 year overall survival was 43%. An important prognostic factor which significantly impacted on survival was the presence of positive pelvic lymph nodes: 5 year overall survival probability was 70% in the group with negative pelvic lymph nodes and only 15% for positive lymph nodes ($p=0.003$). Another important prognostic factor was complete resection: patients who were submitted to R0 resection reported a 5 year overall survival probability of 47% while those in whom resections R1 or R2 were performed had a 5 year overall survival (OS) probability of 10%. Surprisingly this fact did not have statistical significance ($p=0.11$)⁽⁵⁾.

Opposite to Forner's study, other analysis failed to demonstrate the significance of positive lymph node on OS^(6,7).

Marnitz et al. conducted a study on 55 patients with locally advanced or recurrent cervical cancer. Primary surgery was performed in 20 cases with stage IVA cervical cancer. The 5 year OS was 52.2% in cases included in the primary group and only 26.7% in cases with recurrent disease ($p=0.0472$). Other important prognostic factors

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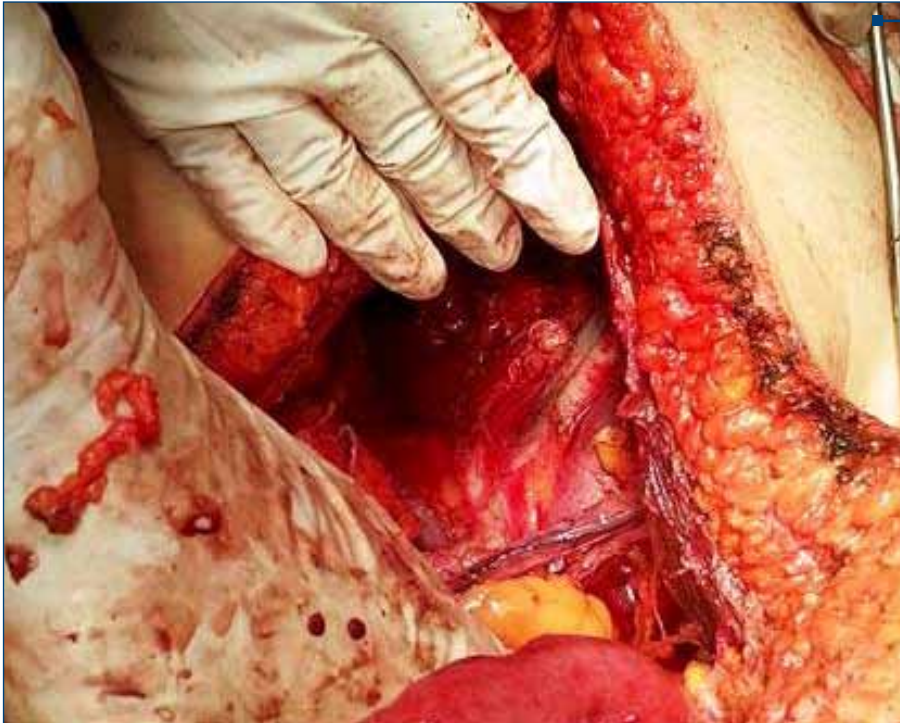


Figure 1. The final aspect after removing the tumor

were the presence of negative resection margins and the curative or palliative intention. The 2-year cumulative survival rate for both groups with primary tumor and recurrent tumor was 55.2 for patients with tumor-free resection margins, and only 10.2% for those with positive margins ($p=0.0057$). The 2-year OS rate was 60% for curatively treated patients with both primary or recurrent cervical cancer, whereas patients treated with palliative intent had a 2-year OS rate of 10.5% ($p=0.0001$). No

statistical significance on OS was found for other factors like adjuvant therapy or lymph node status⁽⁶⁾.

Another study which failed to demonstrate the presence of positive pelvic lymph node status as a negative prognostic factor was Schimdt's study. However they concluded that the presence of positive para-aortic lymph nodes represent a poor prognostic factor⁽⁷⁾.

In their study, Westein and contributors included 160 patients with median age of 55 years, diagnosed with pelvic

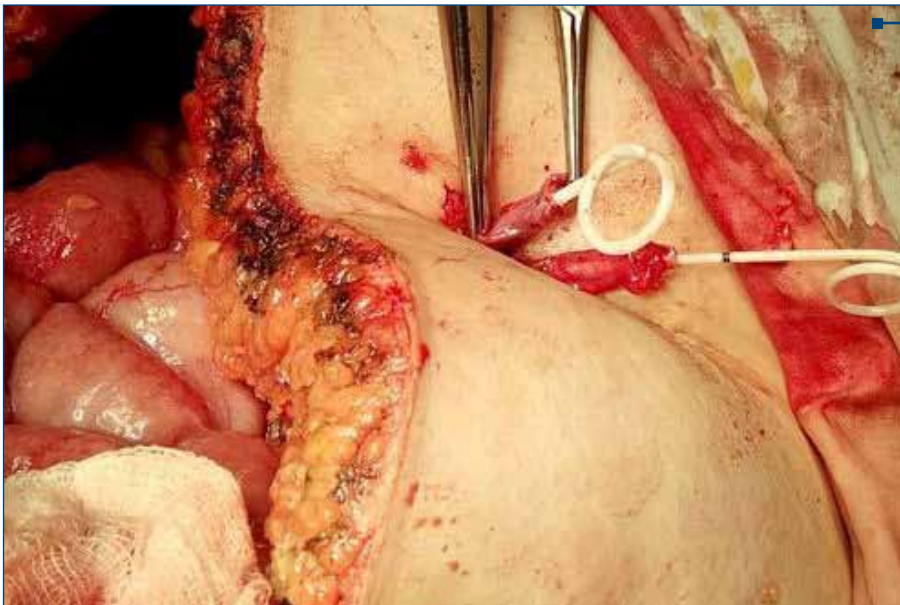


Figure 2. The two ureters were stented and exteriorised on the right side

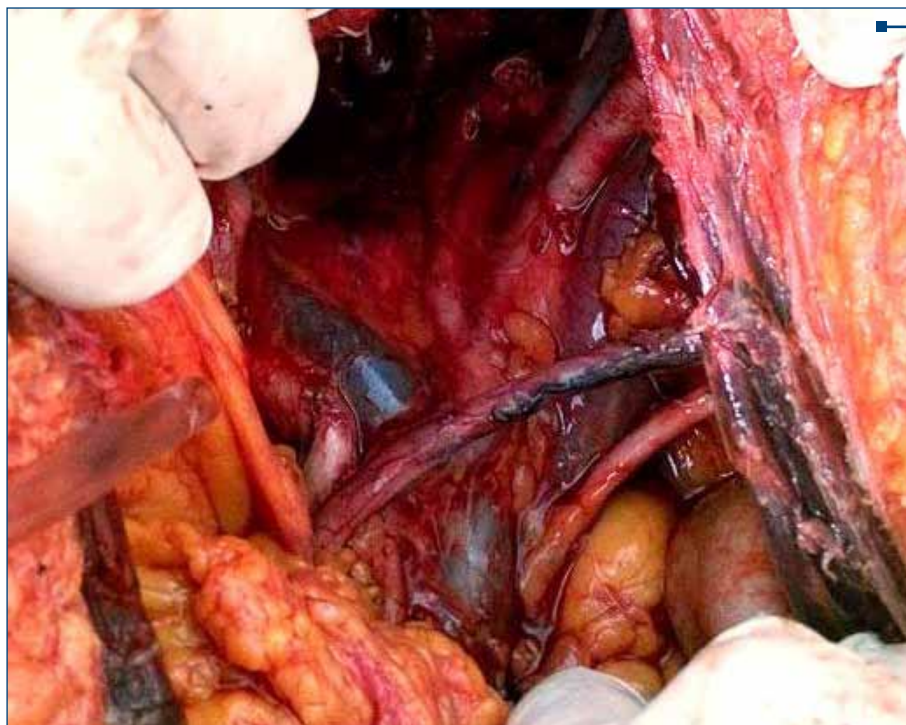


Figure 3. The final aspect after pelvic and para-aortic lymph node dissection

malignancies submitted to pelvic exenteration. Primary tumor location was cervical (86 cases), vagina (38 cases), vulva (20 cases) and uterus (15 cases)⁽⁸⁾. Main surgical procedures were: total exenteration 110 patients (68.8%), 34 (21.3%) anterior, and 16 (10.0%) posterior exenteration. The early postoperative mortality was 1.3% (2 patients died during the first month postoperatively). Five-year OS for the entire cohort was 40% while five-year OS by each cancer type was as follows: cervix 36%, vulva 22%, vaginal 50%, and uterine 56%. They concluded that the most important factors associated with a decreased OS were: vulvar neoplasia as primary tumor, ($p=0.032$), positive resection margins ($p<0.001$), lymphovascular space invasion ($p<0.001$), perineural invasion ($p=0.03$) and positive lymph nodes ($p<0.0001$). In the subgroup of patients with cervical cancer, the presence of positive pelvic lymph nodes and lympho-vascular invasion significantly impacted on disease free survival and OS. When it came to the benefits of neo-adjuvant chemo-irradiation, it didn't seem to be superior to radiotherapy alone ($p=0.263$)⁽⁸⁾.

In Benn's study 54 patients with gynecologic malignancies were included. Primary tumor side was cervix (in 40 patients), vulvar (9 cases) and vagina (5 cases). The most common procedure was total exenteration in 36 cases, followed by anterior exenteration in 13 cases and posterior exenteration in 5 cases. Pelvic lymph node dissection was performed in 42 cases while para-aortic lymph node dissection was performed in 30 cases. At the histopathological examination positive pelvic lymph nodes were seen in 6 cases while para-aortic lymph nodes were un-invaded in all the 30 patients. Sixty-one percent of patients developed complications. Increased OS was associated with cervical cancer versus vaginal or vulvar cancer ($p=0.0005$). Younger age and negative resec-

tion margins were also associated with increased survival ($p=0.01$). Nodal status at the time of exenteration was not associated with time to recurrence or progression, site of recurrence or survival⁽⁹⁾.

Conclusions

Although pelvic exenteration still represents a demanding surgical approach associated with relatively high rates of postoperative complications, it is the only way to offer a good control of pelvic advanced malignancies. Increased OS are seen in cases presenting negative margins and cervical tumor as the primary site of malignancy. ■

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