

# Anterior pelvic exenteration for pre-chemo-irradiated locally invasive vulvar cancer

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## Abstract

Vulvar carcinomas are rare gynecologic malignancies. In cases presenting local invasion oncologic treatment such as chemo-irradiation might be performed. However complete remission is achieved in rare cases, most of the patients necessitating an aggressive surgical therapy such as pelvic exenteration. We present the case of a 78 year old patient who was diagnosed with a poorly differentiated squamous cell vulvar cancer with urethral invasion in whom a total vulvectomy en bloc with anterior pelvic exenteration, pelvic, para-aortic and inguinal lymph node dissection was performed.

**Keywords:** locally invasive vulvar cancer, chemo-irradiation, pelvic exenteration

## Introduction

Vulvar malignancies account for up to 5% of all gynecologic carcinomas, being the fourth most common gynecological cancer<sup>(1)</sup>. Although its' incidence is significantly lower when compared to other gynecological malignancies and although is more easier to be diagnosed, one of the particularities of this primary is the one that more than 25% of cases are diagnosed in an advanced stage of the disease: while up to 19% of cases are diagnosed in stage III of disease, up to 7% are diagnosed in stage IV when disseminated lesions are already present<sup>(2)</sup>. In most cases the first intention therapeutic protocol consists of chemo-irradiation; however a complete and definitive remission of the disease is a rare event, most cases being diagnosed at a certain moment with recurrent or persistent disease<sup>(3)</sup>. In these cases aggressive surgical approach such as pelvic exenteration has been proposed since the early '70's<sup>(4)</sup>. Due to the fact that the presence of a locally invasive vulvar carcinoma usually involves a more complex surgical procedure consisting of infralevator exenteration associated with a total or partial vulvectomy, some authors considered that pelvic exenteration for vulvar cancer should be considered as a particular type of pelvectomy and investigated it in separate studies<sup>(5)</sup>.

## Case report

A 78 year old patient was investigated 18 months previously for the apparition of a vulvar tumoral mass developed anteriorly and haematuria. Local examination revealed the presence of a large vulvar tumor invading the distal urethra (Figure 1) while the biopsy confirmed a poorly differentiated squamous cell vulvar carcinoma. Due to the important extension of the lesion the patient was first submitted to six cycles of irradiation with concurrent platinum based chemotherapy. At the moment of ending the oncologic treatment a slight

regression of the lesion was revealed so the patient was submitted to surgery. A total vulvectomy en bloc with anterior pelvic exenteration, pelvic, para-aortic and inguinal lymph node dissection was performed (Figures 2-8). The patient developed a minimal wound dehiscence during the early postoperative period which was successfully managed in a conservative manner. The histopathological examination of the specimen confir-



Figure 1. Vulvar tumor invading the urethra

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med the presence of a poorly differentiated squamous cell vulvar carcinoma with distal urethral invasion. Lymph node metastases were encountered in six of the 18 inguinal lymph nodes and in two pelvic lymph nodes, three inguinal lymph nodes also presenting a capsular rupture. One month postoperatively the patient was readdressed to the oncology clinic in order to be submitted to adjuvant chemotherapy. At one year follow up the patient is free of any local or distant recurrence.

## Discussion

In cases diagnosed with locally invasive vulvar carcinomas it has been widely advocated that radiation therapy is the treatment of choice as first line procedure<sup>(3,6-8)</sup>. However the efficacy of this treatment widely varies with reported rates of complete response ranging between 28-72% and recurrence rates ranging between 50-100%<sup>(1,6-8)</sup>. Due to these aspects almost all cases initially submitted to chemo-irradiation as first intention therapeutic protocol will become candidates for surgery at a certain moment. Oppositely, other authors tried abandon surgery in favor of chemo-irradiation in order to improve the quality of life and hoping to obtain an equivalent lifespan; however the results were not the one expected neither for quality of life nor for lifespan<sup>(9)</sup>. Other authors demonstrated that the best chance for cure is achieved by cases presenting a complete remission after chemo-irradiation followed by surgery, with an estimated five year survival rate of 60%<sup>(3)</sup>. Regarding the most efficient therapeutic scheme of neo-adjuvant chemotherapy, Gesiler et al demonstrated that association of 5-fluorouracil to the standard therapy with platinum based salts can induce a significant increase of the partial or complete response<sup>(10)</sup>.

The fact that pelvic exenteration might still impose even after completion of pelvic irradiation with concurrent 5-fluorouracil chemotherapy based schemes was reported by other authors. In their study, the authors



Figure 2. Abdominal phase - dissection of the two ureters

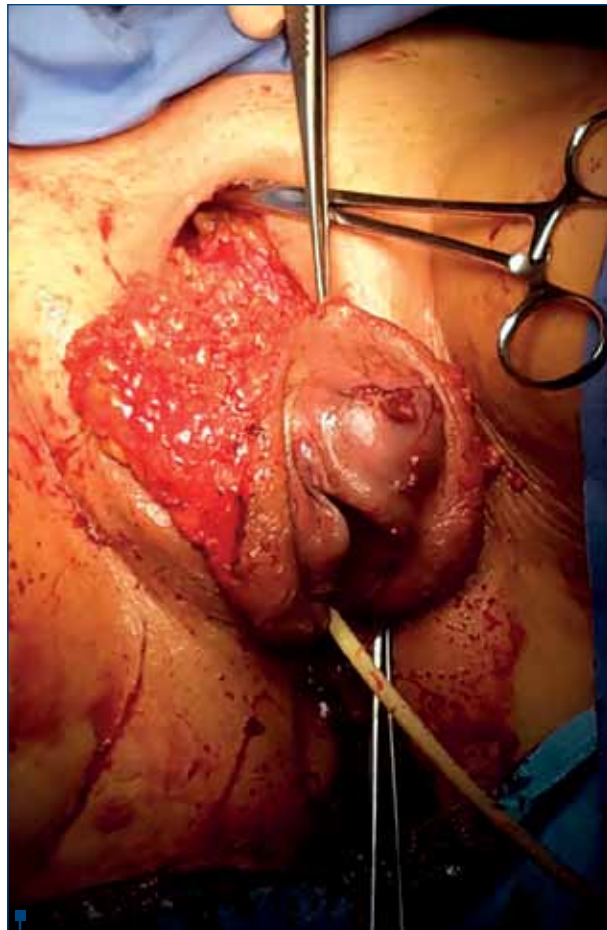


Figure 4. Perineal phase: total vulvectomy en bloc with urethral resection



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



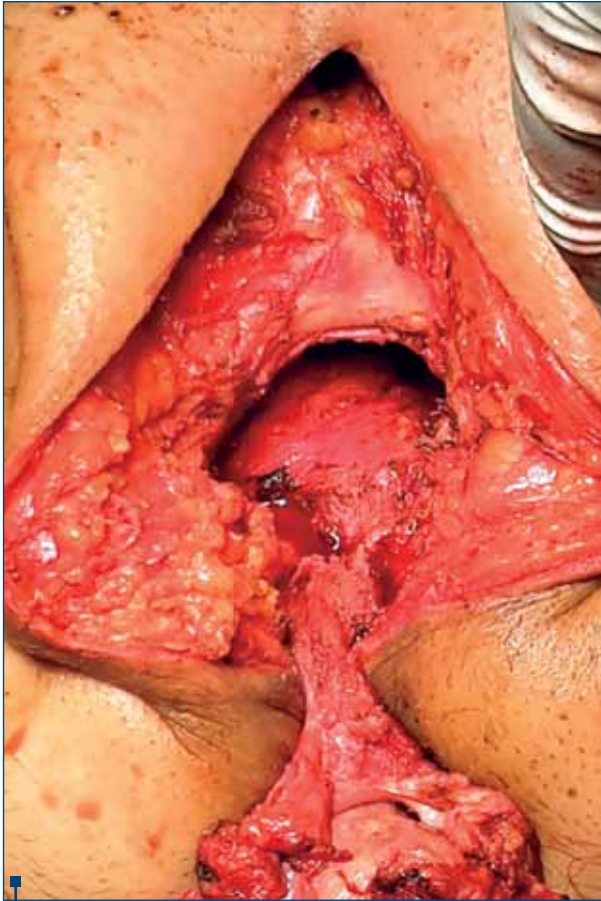


Figure 5. The final aspect - perineal phase

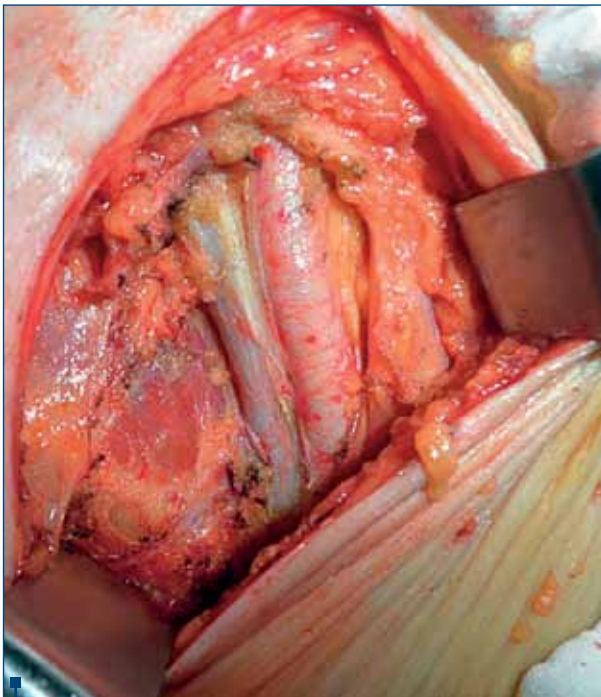


Figure 7. Inguinal lymph node dissection- the final aspect



Figure 6. Necrosed inguinal lymph nodes

reported a complete response in 53% of cases while a partial response was achieved in 37% of cases. Among the 19 patients who had been initially introduced in the study, failure occurred in five patients, all of them being diagnosed within six months and four of them being submitted to radical vulvectomy and/or pelvic exenteration<sup>(1)</sup>.

When it comes to other prognostic factors, it seems that the presence of local lymph node invasion plays a significant role. In Forner's study including 176 patients submitted to surgery for vulvar cancer exenterative procedures were performed in 27 patients. An anterior exenteration was performed in 17 cases, a posterior exenteration was performed in four cases while in the remaining six cases a total exenteration was needed. An inguinal lymph node dissection was performed in 24 cases, pelvic lymph node dissection was performed in six cases while para-aortic lymph node dissection was performed in one case. Among these cases positive inguinal lymph nodes were found in 11 cases, positive pelvic lymph nodes were found in three cases while the patient submitted to para-aortic lymph node dissection also had invaded nodes and was classified as stage IVb of disease. The overall survival significantly varied between patients with positive and negative lymph nodes, with a five year survival rate of 36% and 83% respectively ( $p=0.03$ ). Another significant prognostic factor was the completeness of resection, with a five year overall survival rate of 74% for patients with negative resection margins versus 21% for cases with histological proof of tumor on the resection line ( $p=0.01$ )<sup>(1)</sup>.

However, increased morbidity after surgery in chemo-irradiated patients should not be omitted. Due to this aspect, attention was focused on studying the balance between benefits and risks regarding association of a neo-adjuvant treatment. In van Doorn's review five studies were included. Chemotherapy was performed in all studies; however four different schedules were administered. In the meantime radiation protocols significantly

varied between different papers while skin toxicity was observed in nearly all patients. Operability was significantly influenced by the associated specimen of chemotherapy, the most efficient results being reported in cases in which an association between 5 fluorouracil, docetaxel and cisplatin or 5 fluorouracil and mitomycin C were performed; oppositely, neoadjuvant chemotherapy based on bleomycin specimens were associated with the lowest rates of resectability. The conclusions of the study were that although association of neoadjuvant treatment reduces the sizes of the lesions and can lead to an improved rate of resectability the postoperative complication rates should not be omitted and the quality of life can be seriously compromised.

The authors also concluded that neoadjuvant chemoradiation should be recommended especially in cases diagnosed with inoperable primary tumors while in cases presenting large resectable but locally invasive tumors pelvic exenteration should be performed. In these cases the authors underlined that association of neoadjuvant chemoradiation might even outweigh complications of exenterative surgery<sup>(12)</sup>.

However, in a more recent literature review conducted by Shylasree and contributors including patients submitted to neoadjuvant treatment for vulvar cancer as part of Cochrane Central Register of Controlled Trials, Cochrane Gynecological Cancer Group Trials Register, Medline and Embase the authors concluded that there is no significant difference in terms of survival when chemoradiation was compared with primary surgery<sup>(13)</sup>. In the meantime the same study concluded that there was no significant difference regarding the risk of adverse events in patients submitted to primary or neoadjuvant chemoradiation when compared with those in whom surgery was the first intention treatment. Shylasree's review involved three studies comprising 141 patients with locally advanced vulvar cancer<sup>(13)</sup>.

## Conclusions

Although a standard therapeutic protocol is not yet well established, patients presenting locally advanced

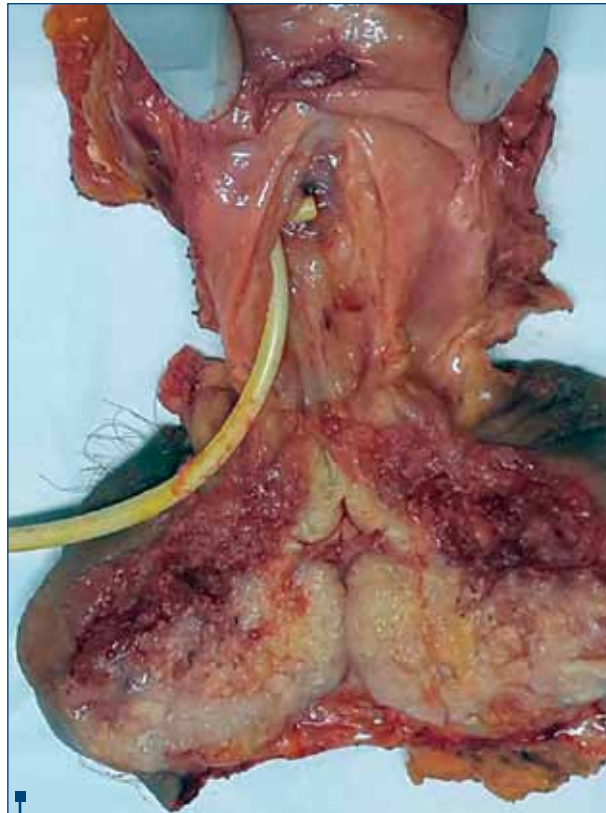


Figure 8. The specimen - total vulvectomy en bloc anterior infralevator pelvic exenteration

vulvar cancer seem to benefit most from an aggressive surgical treatment consisting of multiple visceral resections in order to achieve a good control of the disease.

When it comes to the benefits of neoadjuvant treatment, there is no clear evidence whether it can improve survival or contrarily, it can increase the rate of postoperative complications to an unacceptable level. For patients presenting locally invasive vulvar tumors there is still need for large studies comparing different therapeutic options. ■

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