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Surgery of the vulva in vulvar cancer

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The standard radical mutilating surgery for the treatment of invasive vulval carcinoma is, today, being replaced by a conservative and individualised approach. Surgical conservative modifications that are currently considered safe, regarding vulval lesion, are separate skin vulval-groin incisions, drawn according to the lesion diameter, and wide local radical excision or partial radical vulvectomy with 1–2 cm of clinically clear surgical margins. Regarding inguinofemoral lymph nodes management, surgical conservative modifications not compromising patient survival are omission of groin lymphadenectomy only when tumour stromal invasion is $\leq$1 mm, unilateral groin lymphadenectomy only in well-lateralised early lesions and total or radical inguinofemoral lymphadenectomy with preservation of femoral fascia when full groin resection is needed. Sentinel lymph node dissection is a promising technique but it should not be routinely employed outside referral centres. Pelvic nodes are better managed by radiation. Locally advanced vulval carcinoma can be managed by ultraradical surgery, exclusive radiotherapy or chemoradiation.

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Historical aspects/Introduction

Until the end of the 1980s, the en bloc radical vulvectomy and bilateral dissection of the inguinofemoral and pelvic lymph nodes, described by Taussig [1] and Way [2], represented the standard surgical approach to any primary vulval lesion, regardless of its site or size.

This technique, in extension, consists of a large butterfly incision including portions of buttock, genitocrural folds and Scarpa's triangle skin. In depth, the surgical excision is achieved through the removal of the entire vulva with the inguinofemoral lymph nodes and lymphatics in between along with the sartorius and adductor longus muscle fascia, and the femoral fascia (Fig. 1).

The rationale behind this mutilating surgery, according to the dominant Halstedian surgical philosophy, was the belief that the large resection of healthy tissue to obtain clear surgical margins is essential to improve survival; in addition, it was based on the knowledge of lymphatic drainage derived from Sappey studies during that time. This author was the first anatomist in 1874 to demonstrate that the vulval lymphatics drain mainly to the ipsilateral inguinofemoral nodes located in Scarpa's triangle before reaching the pelvic node [3].

However, in this publication there are also illustrations (Fig. 2 A,B) showing that the perineum and vulva lymphatic channels cross the buttocks and genitocrural folds and this has probably influenced the setting of the large vulval incision, known as the Way–Taussig radical vulvectomy. In his monograph, Taussig published in 1923 (4), at page 154, an illustration of vulval lymphatics (Fig. 2 C) that looks like Sappey illustration (Fig. 2B).

From a clinical point of view, this en bloc excision showed improvement in the 5-year survival rate from 20% to 60% [1,2], but it was associated with important complications like wound breakdown with secondary intention healing, disabling lymphoedema, introital scaring, infections, and fatal thromboembolism.

This large butterfly incision (Fig. 3-A) has been reduced by keeping the margin within the genitocrural folds and by sparing Scarpa's triangle skin (Fig. 3-B), after Parry-Jones demonstrated in 1963,

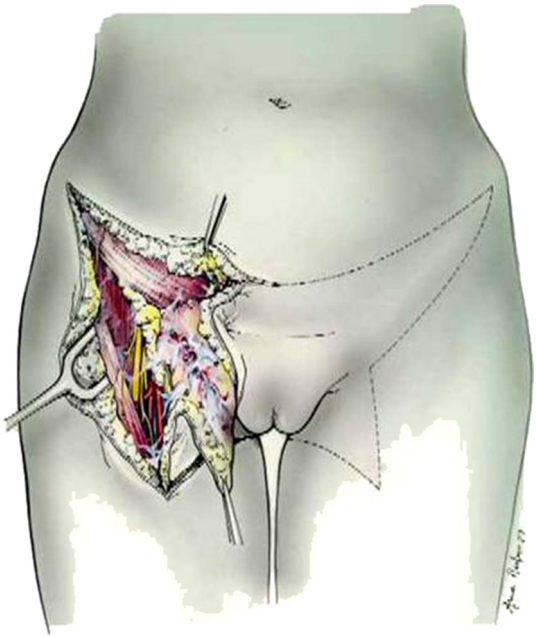

Fig. 1. En bloc Way–Taussig radical vulvectomy showing butterfly skin incision and skeletonised femoral vessels and nerve. The sartorius and adductor longus muscle fascia with the femoral fascia have been removed together with the block of adipose tissue containing the superficial inguinofemoral nodes and the superficial circumflex iliac and epigastric vessels. (Reproduced, with permission, from Micheletti et al., La linfoadenectomia inguino-femorale, CIC Edizioni Internazionali-Roma, 2006, p 43).