

Editorial

## Personalized Treatment of Vulvar Cancer

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Vulvar cancer (VC) accounts for 5% of all gynecologic cancer and the most common histological type is squamous cell carcinoma (up to 90%) [1].

The median age of VC is over 65 years, but in the past decades the incidence of VC in young women is rising, related to Human Papilloma Virus Infection (HPV) [2]. The staging of vulvar cancer is surgical, based on the 2009 Federation International de Gynecology et Obstetrique (FIGO) and American Joint Committee on Cancer (AJCC) Seventh Staging Edition TNM (Tumor, Node, Metastasis) staging [3].

Over the last years, the surgical treatment of VC tumor is changed, from invasive technique to more conservative approach, and becoming as personalized as possible. The original radical vulvectomy approach with en bloc bilateral inguinal-femoral lymphadenectomy was burdened with a high complication rate: infection, necrosis of tissues, pain, functional and body image distortion, deterioration of sexual life and psychological health, making the postoperative management of this tumor very difficult [4]. The modified radical vulvectomy includes superficial and deep fascia lata, with separate incisions for tumor and groin node dissection, sparing several complications [5]. Minimal resection margins were introduced, limited to the tumor (from 1 to 2 cm according to Heaps' study) [6]. Di Saia *et al.* [7] have shown that an alternative approach for early VC is possible, including 20 patients affected by non-invasive VC and comparing wide local excision with radical vulvectomy: the 18 patients who underwent wide local excision have preserved sexual function, assessing orgasm and dyspareunia. The National Comprehensive Cancer Network (NCCN) Guidelines recommend re-excision of positive margins or those classified as close (<8 mm); different studies focused on the safety of smaller margins [8].

A big step in the personalized approach to vulvar cancer was represented by postoperative reconstruction [9,10], based on patients' characteristics and anatomy, with a big improvement of aesthetic results in these patients. The

postoperative reconstruction includes two types of Flaps: Advancement Flap (V-Y Gluteal Fold Flap; Medial Thigh Flap) and Transpositional Flap (Lotus Petal Flap; Gluteal Thigh Flap; Gluteal Fold Flap and Anterolateral Thigh Flap [11,12].

Despite different studies demonstrating feasibility of sentinel node (SLN) biopsy in VC early stages, in more than 50% of the cases inguinofemoral lymphadenectomy is still performed, with high-risk of complications (infection, lymphedema and erysipelas/lymphangitis). Different studies tried to reduce complications of deep lymphadenectomy [13], proposing preservation of the deep fascia, video-endoscopic minimally invasive inguinal lymphadenectomy (VEIL) or sartorius muscle transposition, without significant results. A recent study tried to assess the feasibility and safety of a retrograde extraperitoneal transinguinal novel approach to pelvic lymphadenectomy (TRIPLE) in vulvar cancer patients [14]. Moreover, some specific anatomical sites, such as genital lymphedema, are extremely intrusive in private life, creating discomfort and psychological and there is no consensus about the kind and timing of treatment. Currently SLN biopsy is the gold standard for surgical treatment of VC with size  $\leq 4$  cm and clinically and/or radiological negative inguinofemoral lymph node [2]. If SLN is positive, the management is debated (lymphadenectomy vs external beam radiation therapy (EBRT)). Different studies tried to confirm the safety and feasibility of SLN, sparing patients the complications of lymphadenectomy: GROINSS-V data showed that in patients with negative biopsy, groin recurrence rate was only 2% after almost 3 years and no significant differences with patients with early-stage vulvar cancer treated with groin lymphadenectomy were registered [15]. For patients with stage IIIB, IIIC, and IVA, the gold standard is chemoradiation to the vulvar tumor, groin, and pelvis [1]. Surgical approach after chemoradiation it is considered on a case-by-case basis.

Recurrence rate in VC is 15%–35% and surgery is the most adequate treatment of local recurrence, basing the type



of surgery not only on the dimension of vulvar recurrence but on performance status of patients and previous treatment.

Surgical treatment of VC has evolved in the last years, trying to reduce mutilating results and promoting a personalized approach, considering sexual life and psychological compromise of these patients too.

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AG—conceptualization; ASL and OD—writing original draft preparation; GC and VC—writing review and editing; EV—visualization; AG—supervision. All authors have read and agreed to the published version of the manuscript.

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