Inguinofemoral lymphadenectomy technique in 10 steps

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Inguinofemoral lymphadenectomy is a commonly required surgical procedure in the management of vulvar cancer, particularly when the tumor size exceeds 4 cm, when there is multifocal invasive disease, or when there is clinical or radiological suspicion of inguinal lymph node involvement1.

We present a case of a patient in her mid 50s diagnosed with a 5 cm squamous cell vulvar carcinoma, located in the anterior third of the midline, and involving both the clitoris and the left labia minora. Lymph node involvement and distant metastasis were ruled out at imaging. Consequently, the patient underwent an anterior vulvectomy with bilateral inguinofemoral lymphadenectomy. This surgical video (Video 1) shows a left inguinofemoral lymphadenectomy in 10 steps. Moreover, we used a cadaveric dissection with a pedagogic intention to improve the understanding of the anatomy and the surgical technique.

Performing the skin incision above the inguinal ligament allows for a direct access to the external oblique aponeurosis, helping to identify the boundaries of the superficial inguinofemoral lymphadenectomy.2 The branches of the saphenous vein (circumflex vein, external pudendal and epigastric vein) should be identified and sectioned distally during the superficial lymphadenectomy, as well as proximally at it exits from the saphenous vein (Figure 1). It is crucial to identify and preserve the saphenous vein to minimize the risk of lymphedema. During the deep lymphadenectomy, only the lymph nodes located medially to the femoral and saphenous veins need to be removed, and it is unnecessary to excise...
the nodes located beyond the first 3 cm of the saphenous vein. Moreover, the femoral artery and nerve should not be visualized as they remain covered by the femoral fascia. The use of a soft drainage or negative wound pressure therapy is optional to decrease the risk of lymphocyst and to improve wound healing.

The post-operative course was uneventful, and the patient was discharged 4 days after the procedure. The pathology revealed a 5 cm tumor with free margins, and 22 lymph nodes were removed without involvement. The patient did not receive adjuvant treatment.

In conclusion, standardizing surgical techniques, including those that are commonly performed or apparently less complex, can improve the understanding and learning curve of training surgeons.