



FASCIA LATA PEDUNCULATED FLAP FOR UPPER THIRD RECONSTRUCTION OF THE LOWER EXTREMITY: A CLINICAL CASE PRESENTATION

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ABSTRACT

Objectives: To describe the importance and versatility of the fascia latae flap for coverage of wide defects of the upper third and lower extremity. **Method:** A retrospective study was carried out in a male patient diagnosed with sarcoma of the left inguinal region, who underwent surgical treatment (wide excision with safety margins) + reconstruction and coverage of the bloody area with a local myofasciocutaneous fascia flap of fascia lata. **Results:** A 64-year-old man reported nodular presence in the left inguinal region of 1 year of evolution, the beginning of the size of a pea, which has been increasing in size and becoming painful on palpation, becoming visible on inspection, on palpation the presence of a hard, fixed, painful tumor lesion. Computed Tomography (CT) scan revealed findings regarding probable myxoid liposarcoma and embryonic biopsy of malignant mesenchymal neoplasia in favor of sarcoma. Extensive excision was performed with margin of injury safety + reconstruction and coverage of the bloody area with myofasciocutaneous local pedunculated fascia lata flap. **Conclusion:** Sarcoma is a rare and aggressive soft tissue tumor that can appear anywhere in the human body. There are more than 50 types. Treatment for curative purposes will always be a complete excision with safety margins in both extension and depth, leaving great defects in coverage and functionality in the affected region. It is here where the knowledge of flaps is put into practice for better coverage and preserve the functionality of the area involved. In the upper third of the thigh, the pedunculated fascia latae flap is considered to be of choice due to its versatility (cutaneous, fasciis, muscular), extension, rotation and very low risk of complications.

KEYWORDS : Sarcoma, Fascia Lata, Fasciomyocutaneous, Flap.

INTRODUCTION

Oncological plastic surgery is a branch of plastic surgery that is responsible for the reconstruction of patients after any type of oncological surgery that is currently increasingly demanding and practiced by plastic surgeons, especially in the public sphere; For this, it is necessary to have a broad knowledge of anatomy, physiology, obviously a surgical stress which will allow to elucidate and determine the best option to obtain an optimal anatomical, physiological result and why not talk about aesthetic result.

In reconstruction of the upper third of the lower extremity, there are several reconstructive options that follow the therapeutic ladder according to the size and depth of the bloody area or area, ranging from primary closure, closure by second intention, total skin grafts, pedunculated local flaps (of which we have multiple alternatives) and free flaps.

When you have an extensive coverage defect, the tensor fascia latae flap is one of the most suitable because it is relatively easy to mark and lift; In addition, its extension is

considerable, it has good rotation, a vascular pedicle almost always constant type I (transverse branch of the lateral femoral circumflex artery and concomitant veins), it can be cutaneous, muscular, musculocutaneous-like according to the need and with little risk of complications.

In our clinical case, there was a defect of wide coverage after wide tumor resection involving the sartorius muscle, for which a musculocutaneous coverage of fascia lata flap was designed and performed with good anatomical and functional results in the medium term, achieving rapid and adequate ambulation of the patient.

METHODOLOGY

A retrospective study was carried out in a male patient diagnosed with sarcoma of the left inguinal region, who underwent surgical treatment (wide excision with safety margins) + reconstruction and coverage of a recurrent coverage defect with local myofasciocutaneous fascia flap.

Clinical Case Presentation

A 64-year-old male patient with a history of hypertension for 15 years was treated clinically. He reports nodular presence in the left groin region of 1 year of evolution, adding that the lesion begins in size of a pea, which has been increasing in size causing discomfort to ambulation, becoming painful on palpation, becoming visible on inspection.

Physical medical examination at the level of the upper third of the anterior-external aspect of the left thigh, on the sartorius muscle, a hard, fixed, painful tumor lesion of 7 x 5 x 3.5 centimeters in diameter, with regular edges, was observed and palpated.

Medial femoral pulse to injury without involvement, no other lesions were observed at the pelvic, perineum and external genitalia levels.



Image 1 Image 2

Image 1.2: Frontal view, lateral 45 degrees left, showing an inguinal tumor lesion.

Complementary examinations are requested, among which the following should be highlighted:

- **Simple and Contrasted Computed Tomography:** At the level of subcutaneous cellular tissue in the anterior region of the left thigh, a hypodense mass with lobed edges is observed, which when used in the contrast medium presents heterogeneous enhancement measuring 49 x 29 mm.
- Findings in probable relation to myxoid liposarcoma to be ruled out by histopathological study.
- **Incisional Biopsy of Lesion:** Malignant Mesenchymal Neoplasm in Favor of Sarcoma

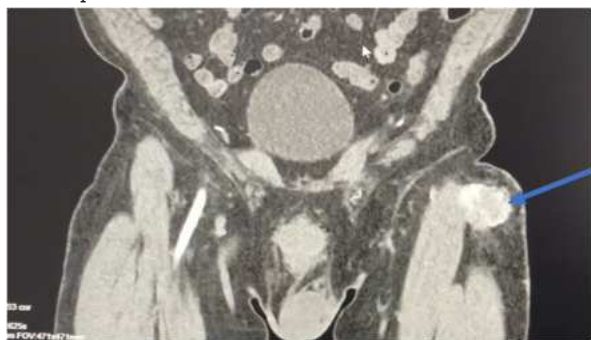


Image 3

Image 3: Coronal cross-section capture of Contrast Tomography showing a tumor lesion with contrast uptake, heterogeneous enhancement in the anterior region of the left thigh.

In conjunction with the oncological surgery service, wide excision of the tumor with safety edges was performed, leaving a fasciocutaneous coverage defect of 16 centimeters in the oblique axis (inferoexternal to superoexternal) x 12.5 centimeters in the transverse axis x 6.5 centimeters in the deep plane with sartorius muscle section.

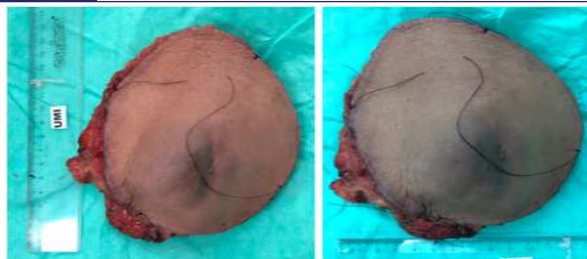


Image 4

Image 5

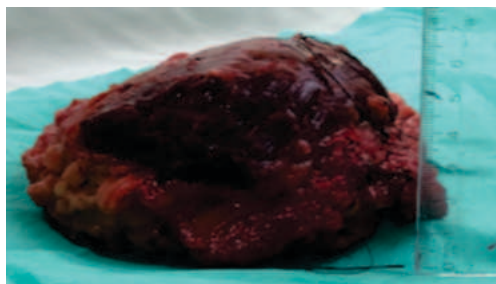


Image 6

Figure 4,5,6: Photos of a resected tumor lesion with measurement in its different axes.



Image 7

Image 7: Musculo-fasciocutaneous coverage defect after wide tumor excision of Sarcoma

A local musculosciocutaneous pedunculated fascia lata flap was designed and made, proceeding to lift it from distal to proximal in relation to the nutritive pedicle, by identifying this pedicle (lateral femoral circumflex) and preserving it we have guaranteed the vitality of the flap, then the flap was rotated to 90 degrees to fix it in the area of coverage defect and the donor area was closed by first intention. At 24 hours postoperatively, a vital flap was evident, with a small congestive area around 9 o'clock clockwise from the base of the flap that resolved spontaneously at 72 hours postoperatively and an epidermolytic area in the upper part of the suture of the donor area that required advanced dressings with good results.



Image 8

Image 9

Figure 8.9: Local fascia lata flap 24 hours postoperatively.



Image 10

Image 10: After 10 days of surgery. A flap without suffering, vital, is evident. Clean epidermolytic area, maintained in advanced healings.



Image 11

Image 11: After 17 surgical days.



Image 12

Image 12: Patient retains normal lower extremity mobility since 7 days post-surgery, ambulating without problems, without the aid of gait devices since the tenth postoperative day.

DISCUSSION

Any malignant tumour lesion must be thoroughly assessed by specialist personnel in order to give a correct and adequate diagnosis, treatment before it spreads causing metastasis.

It is important to highlight the work of a multidisciplinary team to achieve the healing and reconstructive goal.

When performing a wide tumor excision we have often found very large coverage defects both in extension and depth, which will always be a challenge to repair, reconstruct trying to maintain normal physiology and functionality or resemble it. That is why in recent years there has been an important

growth of a branch of reconstructive plastic surgery called "Oncoplastic Surgery"; the same that is no longer limited to breast reconstruction; rather, it details techniques for reconstruction and coverage of areas with large coverage defects resulting from oncological surgeries, impossible to close or cover without adequate academic and practical knowledge and training.

CONCLUSION

A broad knowledge in the performance of flaps is of vital importance in the doctor with a specialty in plastic surgery, which will allow the adequate functional, physiological and aesthetic resolution of wounds that involve a significant deficit of coverage in any part of the human body.

For the reconstruction and coverage of the upper third of the lower limbs we have many alternatives; But without a doubt, the local pedunculated fascia lata flap has become the most widely used due to its pre-surgical marking, its design, relatively easy flap lift, along with versatility in coverage, rotation and practically low risk of complications.

In the clinical case presented with a fairly extensive coverage defect in the upper third of the left thigh, the local pedunculated fascia lata flap had excellent results, allowing the patient a rapid recovery, ambulation without presenting complications that could affect its integrity.

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