Use of the inverted "T" incision to approach a plantar nodular lesion*

Felipe Maurício Soeiro Sampaio[1]
Gustavo Vieira Gualberto[1,2]
Paulo Roberto Cotrim de Souza[1]
Fabrício Tinoco Lourenço[1]
Fernando Gustavo Mósca de Cerqueira[3]

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Abstract: Knowledge of the inverted "T" incision - used in plastic, oncologic and orthopedic surgery - has allowed its adaptation for the diagnostic assessment and therapeutical approach of acral, nodular lesions. The authors describe the use of this technique for the surgical approach of a patient with a plantar nodular lesion, further diagnosed as a calcified angioleiomyoma.
Keywords: Ambulatory surgical procedures; Surgical flaps; Surgery, plastic

We describe the case of a 53-year-old, brown-skinned man who had had a nodular lesion for four years. The lesion was well-delimited, regular-shapped, had a smooth surface, measured 4x2 cm in diameter, was mobile to palpation, had a relatively softened center and indurated edges, and was located in the left plantar region at the level of the first metatarsus (Figure 1A). Despite experiencing pain with ambulation, the patient denied adenomegalies or impairment of general condition.

The patient underwent excisional biopsy for histological assessment. 1g of intravenous cefazolin was administered intraoperatively. Antisepsis was performed with a 5% alcoholic solution of chlorhexidine gluconate.

Surgical incision lines in the shape of an inverted "T" and bordering the edges of the lesion were marked before local infiltration of anesthetic solution containing 5mL of 2% lidocaine, 15mL of 0.9% saline, 2 mL of 8.4% bicarbonate and 0.2 mL of 1mg/mL epinephrine (Figure 1B).

With the incision and displacement, two cutaneous lobes were created. This promoted a better visualization of the lesion and the deep layers (Figure 1C).

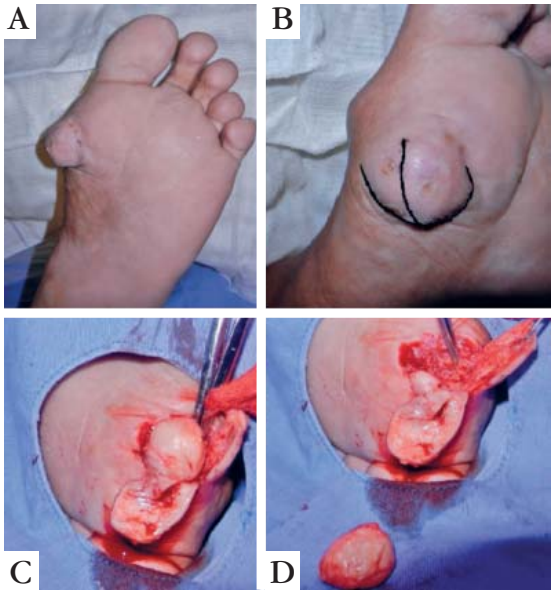

FIGURE 1: Angioleiomyoma. **A.** Lesion in the preoperative period. **B.** Drawing of the incision lines resembling an inverted T. **C.** Creation of two cutaneous lobes. **D.** Complete excision of the subcutaneous lesion

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[1] Hospital Federal de Bonsucesso – Rio de Janeiro (RJ), Brazil.
[2] Santa Casa de Misericórdia de Belo Horizonte – Belo Horizonte (MG), Brazil.
[3] Hospital Municipal Menino Jesus - Rio de Janeiro (RJ), Brazil.

A whitish spherical lesion with a smooth surface and indurated to palpation was completely dissected from the subcutaneous tissue until the level of the tendon of the abductor hallucis muscle and the tendon of the flexor hallucis longus muscle, which were kept intact (Fig. 1D).

After hemostasis testing was reviewed, the surgical defect was reconstructed using only one of the skin lobes of the initial incision. The remaining lobe was removed. It was not necessary to close the incision in layers. Cutaneous suture was performed by simple interrupted stitches using 3-0 mononylon (Figure 2A).

The stitches were removed on postoperative day 21. The procedure healed uneventfully and excellent functional and aesthetic results were achieved. (Figure 2B). After one year of outpatient follow-up, the patient remains asymptomatic and without recurrence.

Histopathological assessment was conclusive for the diagnosis of calcified angioleiomyoma. It is considered to be a rare, benign, painful tumor located in the acral regions and predominant in female patients.[1-3] Calcinosis, inclusion cyst, nodular fasciitis, neurofibroma, angiolipoma and liposarcoma are some of the possible differential diagnoses.[2-5]

The surgical approach using the "T"-incision technique has proved to be useful in other situations, such as reductive mammoplasty and sagging skin of the breast region, surgical treatment of pelvic sarcomas and uterine carcinoma, nail surgery and tracheotomies.[6-10]

Figure 2: Postoperative period. **A.** Suture of only one of the cutaneous lobes was used to reconstruct the surgical defect. **B.** Outpatient follow-up: postoperative day 43

The advantages of this technique include an enlargement of the field of view of the surgeon, facilitates the dissection of deep structures and allows for safer tumor resection. The creation of two cutaneous lobes reduces surgical time. No flaps or grafts are required and it spares surrounding tissue in the reconstruction of the surgical defect. The vascularization by lobe randomization promotes a satisfactory healing without evidence of necrosis. ❑

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Mailing address:
Felipe Maurício Soeiro Sampaio
Av. Nossa Senhora de Copacabana, 1059 - sala 1003
Copacabana.
22060-001 - Rio de Janeiro - RJ
Brazil
E-mail: felipemauricio@uol.com.br

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