Giant lipoma: surgical treatment

Lipoma gigante: tratamento cirúrgico

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INTRODUCTION

Lipomas are benign neoplasms histologically characterized by the presence of mature adipocytes with small nuclei pushed to the cellular periphery by lipid droplets1,2. The tumor presents variable amounts of fibrous stroma, sometimes condensed in the lesion’s periphery, forming an incomplete capsule (pseudocapsule)3. Lipomas are the most frequent benign soft tissue mesenchymal tumors4,6, with an

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estimated incidence in the adult population of 0.21% to 0.5% and a prevalence of 10%.

Lipomas are usually subcutaneous, but they can be located anywhere in the body that contains adipose tissue, including viscera, cavities, central nervous system, gastrointestinal tract, muscles and joints. About 80% are smaller than 5 cm in diameter; however, some can reach more than 20 cm and weigh several kilograms, configuring the so-called giant lipomas. Diagnosis of lipomas is clinical-histopathological, and treatment is usually surgical.

According to Sanchez et al., for a lipoma to be considered giant (GL), it must have a minimum of 10 cm in one of its dimensions or weigh at least 1000 grams. The largest reported GL in the world was 22.7 kg, and, in Brazil, 22.0 kg.

GL are uncommon in clinical practice (< 5% of all lipomas). Although rare, they have medical relevance, as they can affect any body region and are diagnosed in advanced stages in which there is aesthetic and/or functional impairment. They can be confused with malignant soft tissue neoplasms. Finally, GLs natural history is still not exactly known.

**OBJECTIVE**

This work aims to report a case of GL treated with elliptical excision by the plastic surgery team at Hospital Roberto Santos (Salvador/BA) in 2016.

**CASE REPORT**

The report followed the recommendations of SCARE (Statement Consensus Based Surgical Case Report Guidelines 2018). The retrospective study was approved by the Medical Ethics Committee (CAAE 46603221.7.0000.5028, opinion 4.793.410).

Male, 62 years old, faioderm, farmer, 74 kg, 1.80 m, with a voluminous dorsal tumor that started 20 years earlier as a small bulge of slow and progressive growth, reaching its current dimensions five years ago. Since then, the patient has experienced local pain, grotesque deformity and social isolation.

On examination, a hemispherical mobile mass measuring 35 cm in diameter was observed in the proximal third of the back, not adhering to deep planes, painless, softened, with normal overlying skin (Figure 1A). No abnormalities were found in family history, general physical examination or laboratory evaluation (blood count, coagulogram, blood glucose, urinalysis, urea, creatinine, electrolytes and ECG).

Multiphase CT of the chest (Toshiba Aquilion 8-slice) revealed a multiseptated subcutaneous mass with fat density, measuring 21.0 x 23.1 cm, located in the upper third of the dorsum compatible with GL. The examination did not detect compression of thoracic or cervical structures.

The treatment instituted was surgical excision. Thirty minutes before the procedure, intravenous antibiotic prophylaxis (cefazolin, 2,000 mg) was performed. However, drug thromboprophylaxis was not performed due to the low risk of developing intraoperative thrombosis (according to the criteria and recommendations proposed by Moulin et al.).

Under general anesthesia, a 30 cm x 5 cm transverse elliptical incision was made over the tumor dome, which was dissected from the surrounding subcutaneous and muscular tissues. The mass had a greasy appearance and consistency and had internal septa and a fibrous external capsule forming a cleavage plane (except on the deep side of the tumor) that facilitated dissection and resulted in limited bleeding. A massive multilobed lipomatous tumor was removed (Figure 1B), showing its paravertebral emergence from the middle part of the left trapezius (Figure 1B - arrow). After hemostasis, excess skin was removed and closed with an inverted W suture (Figure 1C). Stitches were made with 2-0 black mononylon thread in subdermal (simple inverted) and intradermal (continuous cuticular suture) planes.

The entire procedure, including skin suturing, lasted four hours and thirty minutes and was performed by a team coordinated by a plastic surgeon with 20 years of training in the specialty. The patient was discharged from the hospital after seven days of uncomplicated hospitalization. Postoperatively, he was instructed to apply wet gauze dressings and antibiotic ointment (bacitracin and neomycin) until complete healing, followed up on an outpatient basis by the surgical team weekly for the first month and then every two months.

Histopathological analysis revealed a giant lipoma measuring 2881 grams, measuring 29.0 x 26.0 x 6.0 cm. In the sixth month evaluation, the operated region remained flat, with a slightly hypertrophic surgical scar (5 mm, Figure 1D) and slightly depressed in the 5-year evaluation (Figure 1E). The patient and the surgical team considered the final result (aesthetic and functional) excellent.

**DISCUSSION**

The current report presents a typical patient with GL: a male in the sixth decade of life with a slow-growing tumor and unrecognized etiology. The lipoma’s dimensions and mass (2881 g), although reduced concerning the bulkier GLs described, fit into the most common range described for GL (493.75 g to 3.8 kg-cm). The preoperative diagnosis of the
The present report’s lack of postoperative adverse effects seems to be an exceptional finding, since immediate complications after GL resection are frequent, including paresthesias, skin necrosis, surgical wound infections, lower limb varicose veins and pulmonary complications. Late postoperative complications have not been reported. Post-surgical relapses are considered low for the intermuscular variant and slightly higher for the intramuscular type, especially when the affected muscles are preserved.

CONCLUSION

The presented GL was removed without complications and with excellent aesthetic and functional results.

COLLABORATIONS

SCS  Analysis and/or data interpretation, Conceptualization, Design, Study design, Conceptualization, Final manuscript approval, Formal Analysis, Investigation, Methodology, Project Administration, Supervision, Writing - Original Draft Preparation, Writing - Review & Editing.

RAV  Final manuscript approval, Realization of operations and/or trials.

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