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Giant lipoma extending into two thigh canals: A case report

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ABSTRACT

Giant lipomas, although rare, represent a real diagnostic and therapeutic challenge. We report an unusual giant lipoma of the thigh extending into two thigh canals and it's diagnostic and therapeutic processes.

Introduction

Lipomas are the most common benign mesenchymal tumors of which the prevalence rate is 2.1 per 1000 people.[1] Most lipomas are small, weighing only a few grams. However, those weighing up to 200 g have occasionally been encountered.[2] For a lipoma to be referred to as “giant” it should be 10 cm or more at least in one dimension or weigh minimum of 1000 g.[3]

In this study we present an unusual giant lipoma of the thigh that also extends two thigh channels proximally and distally.

Case report

A 53-year-old man presented with a 7-year history of a slowly progressive swelling of the right thigh (Fig. 1). The patient's main concern was the irregular profile of the thigh, which caused him difficulties in wearing clothing. Clinical examination revealed a painless, nontender, firm mass on the anterior surface of the right thigh. No skin changes or dimpling was present. Magnetic resonance imaging of the region had been performed 1 year ago and revealed a well-defined-wide mass (10 × 14 × 23 cm) originated from the sartorius muscle. The mass showed fat density with septas. Femoral neurovascular bundle and adjacent muscles were compressed (Fig. 2a and b). Since the mass dimensions enlarged rapidly in the last year, we planned to take a new magnetic resonance imaging which could not be performed due to patient's claustrophobia. Incisional biopsy revealed mature fat cells.

The patient was operated on under spinal anesthesia. The tumor was easily separated with an overlying ellipse of the excess skin. Good care was taken to prepare the femoral vessels and nerve. The mass infiltrated inguinal canal proximally and subsartorial canal distally. These parts were also excised en bloc with the tumor. After a suction drain was positioned, the wound was closed in layers. The patient's postoperative healing was uneventful and he could be discharged after 2 days.

The specimen weighed 3560 g and measured 35 × 20 × 10 cm (Fig. 3a and b). Histological examination of the specimen revealed a benign lipoma. The patient was followed for 24 months without recurrence.

Discussion

Giant lipomas, although rare, have been described in different anatomic locations such as thigh,[4] buttock,[5] scapular region and abdominal area.[6] The largest cutaneous lipoma reported in the literature was 24,950 g and located on the right thigh of a 48-year-old woman with morbid obesity.[2] Although lipomas have no particular signs and symptoms, giant lipomas may present many social life (walking, wearing clothes …) and health problems (pain,

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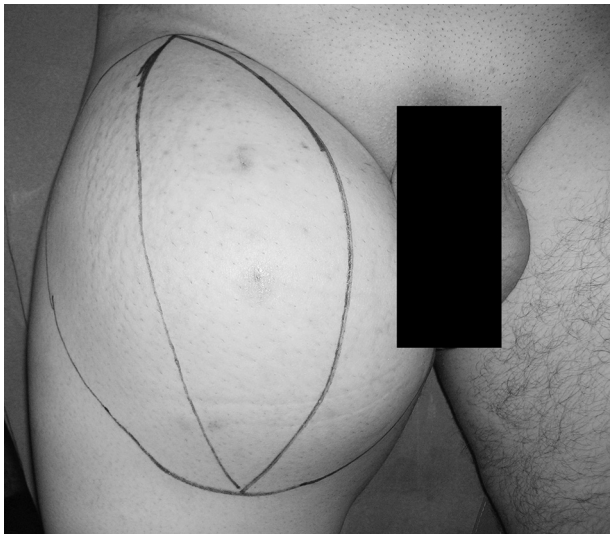

Fig. 1. The huge mass of the right thigh.

Fig. 2. Magnetic resonance imaging of the lesion. The mass originated from the sartorius muscle. (a) Proximal scan. (b) Distal scan. Sartorius muscles are pointed by arrows.

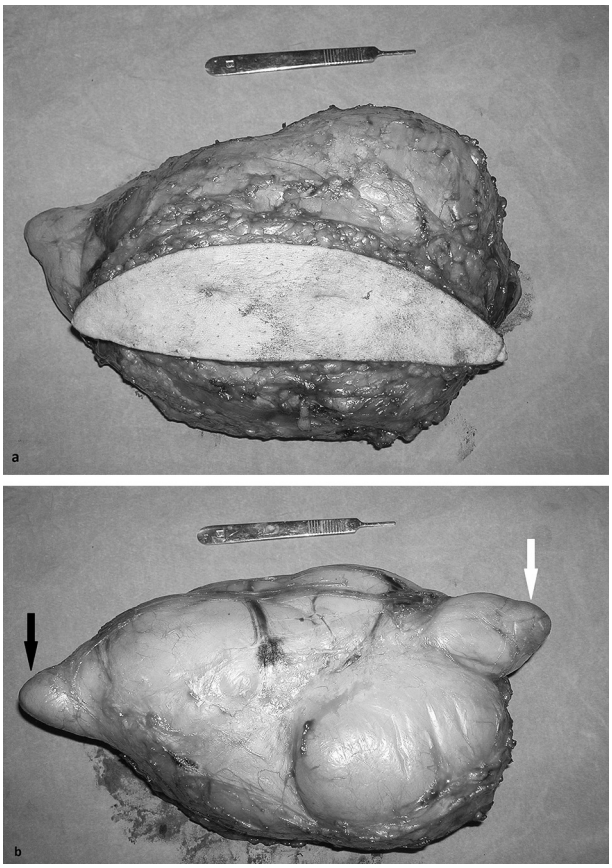

Fig. 3. (a) Anterior view of the specimen. (b) Posterior view of the specimen. The mass infiltrated inguinal canal proximally (black arrow) and subsartorial canal distally (white arrow).

lymphedema …) depending on the site and size of the lesion and on local pressure effects.[5]

Giant lipomas represent a real diagnostic and therapeutic challenge. The main concern in the diagnostic procedure for huge lipomas should be to rule out malignancy.[2] Features that suggest malignancy include old age, large size, presence of thick septa, presence of nodular and/or globular or nonadipose mass-like areas, and decreased percentage of fat composition.[7] It is also reported that the intramuscular location of a lipoma is a risk factor for malignancy.[1] Many of these factors were present in our case. Fine-needle aspiration biopsy, computed tomography and magnetic resonance imaging scans can aid in establishing a preoperative diagnosis.[4,5,7] However, certain preoperative diagnosis is almost impossible, because of limitations in distinction between lipomas and well-differentiated liposarcoma by computed tomography or magnetic resonance imaging.[7] Also, fine-neddle aspiration biopsy may come up short to offer sufficient samples due to huge dimensions of the mass.[2]

There are two therapeutic options for giant lipomas: Open surgery and suction assisted lipectomy. Superior aesthetic results and decreased morbidity are the advantages of suction assisted lipectomy when compared with open surgery.[6] However, there may be a slightly higher risk of recurrence due to incomplete removal of the lesion and nerve damages resulting from blunt traumatisation with liposuction cannulas.[6,8,9] Also, the presence of thick capsule and fibrotic nature render the liposuction unfeasible.[6] Open surgery is still the best therapeutic modality. Because giant lipomas usually have a well-defined pseudocapsule, dissection around these benign neoplasms is performed rather easily.[10] It allows complete removal of the lesion, prevents recurrences, relieves apprehension of malignancy and avoids hazardous manipulation to adjacent vital tissues.[5,6]

In conclusion, lipomas may reach the huge dimensions, and even invade the narrow canals. When encounter with a giant

lipoma, malignancy should be always kept in mind. Although many clinical features and diagnostic tools have been described, accurate preoperative diagnosis is almost impossible. To establish a correct final diagnosis and prevent recurrences, we believe that early surgical excision is mandatory.

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