Case report

Giant lipoma of the back affecting quality of life

Olcay Guler a,*, Serhat Mutlu b, Mahir Mahirogullari a

a Orthopedics and Traumatology Department, Medipol University, Medical Faculty, Istanbul, Turkey
b Orthopedics and Traumatology Department, Kanuni Sultan Suleyman Training Hospital, Istanbul, Turkey

ABSTRACT

Lipomas are benign tumours composed of adipose tissue. They may be localized in almost all body parts and may be in a giant form. Some of these giant lipomas may transform malignity and cause problems in daily living and detoriate quality of life. Mass localization also restrict body functions. In the present study, a 72-year-old man who presented with a mass enlarged in a time period of two years and because of this could not lie in the supine position, sit in an erect position and dress easily, go outside because of his physical appearance. With surgical treatment a 38×22×21 cm mass weighing 3575 g was successfully resected. Postoperative early phase complications did not occur. During 48 months of post-operative period, any recurrence was not detected and the patient was free of all his complaints. Cosmetic and functional results of the surgery and patient satisfaction were excellent. After surgery patient’s quality of life was improved and restriction of body function was disappeared.

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1. Introduction

Among the most common mesenchymal neoplasms in humans are lipomas, which occur more frequently in mature adults aged 40–60 years [1]. Lipomas can arise from any part of the body where normal fat is present. They occur regularly on the back of the neck, but are seldom found on the face, scalp, or sternal region [2–7]. Most lipomas are small, weighing only a few grams and measuring less than 2 × 2 cm. They usually remain asymptomatic and present simply as a localised mass that causes cosmetic concerns for the patient.

Lipomas are typically slow-growing tumours; only a few grow to an exceptionally large size. A giant lipoma was defined by Sanchez et al. [8] as a lesion that measures at least 10 cm in one dimension or weighs a minimum of 1000 g. In this report, we present a case involving a patient with a giant lipoma that caused cosmestically unacceptable gibbosity, difficulty with sitting in an erect position and getting dressed, avoidance of going outside because of cosmetic concerns, and the inability to lie in the supine position.

2. Case presentation

A 72-year-old man presented with a complaint of a gibbosity that prevented him from lying in the supine position, caused difficulty while sitting in an erect position and dressing, and led to avoidance of going outside because of his physical appearance. He had been aware of the lipoma for 10 years; however, the lesion had enlarged rapidly over a period of 2 years. Our patient had no relevant family history, systemic disease, or specific predisposing factors. A physical examination revealed a mobile mass with distinct contours and thickened skin overlying its apex; it was localised exclusively in the mid-thoracic region, but extended from the cervical region to the upper lumbar region (Fig. 1a). No deficits were detected on neurological examination. The patient’s body mass index was 29.4 kg/m² (height: 170 cm, weight: 85 kg). Ultrasound
(US) examination revealed a lipoma-like mass that measured $34 \times 20 \times 17$ cm and was sharply contoured, homogenous, and isoechoic with subcutaneous fat tissue and that possibly contained fat necrosis related to two calcifications ($3$ and $2$ cm in size, respectively). Magnetic resonance imaging (MRI) confirmed that the mass was $34 \times 20 \times 17$ cm in size, hyperintense on T2-weighted (T2W) and T1W transmissible spongiform encephalopathy (TSE) images, hypointense on fat-saturated TSE images, and exhibited no contrast enhancement on T1W TSE images after intravenous (IV) contrast infusion. The mass also had a signal characterisation similar to the subcutaneous fat tissue and necrotic fat tissue related to the two calcifications ($3 \times 3$ cm and $2 \times 2$ cm in size, hypointense on T1W and T2W TSE images, and without contrast enhancement after IV contrast infusion). It was a fibrous septated structure with no evidence of malignant transformation or paravertebral intramuscular expansion and was detected at the posterior of the left hemithorax between T1 and T12 (Fig. 1b). The preoperative diagnosis was a lipoma. The patient was prepared for surgery while in the prone position. The patient did not receive local anaesthesia. A fusiform incision that circumscribed the overlying thickened skin and continued longitudinally to the terminal ends was performed.

Fig. 1. (a) Lateral view of the patient with a mobile mass localised on the mid-thoracic region preoperatively. (b) Mass on axial MRI images.

Fig. 2. Excised specimen. Weight, 3575 g; size, $38 \times 22 \times 21$ cm.

Fig. 3. Postoperative lateral view of the patient.
was reluctant to go outdoors because of his physical appearance. The patient requested cosmetic treatment for the unacceptable gibbosity; he had no complications related to the anatomic location. The patient was also experiencing neuromuscular dysfunction [16,17]. In the present case, we found that one of the primary factors causing functional limitations was the size and weight of the mass, which could cause pain and restriction of movement. A previous investigation [15] elucidated further information about the significance of such factors, and in the present case, the benign nature of the lipoma was confirmed by histological examination and the results indicated a lipoma with no irregularity and thickened septae. Additionally, histopathological diagnosis was consistent with lipoma.

3. Discussion

In the literature, giant lipomas have been described as measuring up to 10 cm in diameter and weighing up to 1000 g [6]. Also in literature giant lipoma localizations were reported as back and posterior cervical area (Table 1) [2–7]. The largest lipoma in the English-language literature was reported in 1894; it weighed 22.7 kg and was located on the left scapula of a young man [2]. The present case is the largest giant lipoma reported in last decade and the fifth largest giant lipoma in the English-language literature, weighing 3575 g and measuring 38 × 22 × 21 cm (Fig. 2). At the final follow-up (48 months after treatment), the patient was found to be free from all complaints and very satisfied. He was able to lie in the supine position, sit in an upright position, and dress himself without difficulty, and he was satisfied with his appearance because of the resolution of the gibbosity (Fig. 3). He answered, “yes” to the question: Would you like to receive the same treatment again for this problem?

Table 1
Largest giant lipomas located on the back in the English-language literature (>10 cm and >1000 g).

| Author | Size (cm) | Weight (g) | Location |
|--------|-----------|------------|----------|
| Brandler TI [2] | 22 | 22,700 | Scapula |
| Martin HS [3] | 12.5 | 12,500 | Neck and upper back |
| Bissel AH [4] | 21 | 9000 | Upper back |
| Silistre OK [5] | 21 | 6450 | Posterior cervical/interscapular area |
| Aydogdu E [6] | 31 | 1950 | Back |
| Terzioglu A [7] | 21 | 1135 | Back |

The neoplastic mass and its overlying thickened skin were excised totally from posterior of thoracolumbar area by using surgical blade for skin incision and monopolar electrocautery for mass excision with haemostasis control. A Hemovac drain was inserted at the end of surgery. The patient was mobilised on the first postoperative day. For postoperative analgesia, the patient received acetaminophen (1000 mg every 8 h as an IV infusion) and diclofenac sodium (75 mg every 12 h as an intramuscular injection). The Hemovac drain was removed 24 h postoperatively, and the contents measured 320 ml. One unit of erythrocyte suspension was infused postoperatively. No haematomas, incision complications, infection, or neurological complications were detected postoperatively. The patient was discharged on postoperative day 2. A specimen was sent for histopathological examination, and the results indicated a lipoma weighing 3575 g and measuring 38 × 22 × 21 cm (Fig. 2). At the final follow-up (48 months after treatment), the patient was found to be free from all complaints and very satisfied. He was able to lie in the supine position, sit in an upright position, and dress himself without difficulty, and he was satisfied with his appearance because of the resolution of the gibbosity (Fig. 3). He answered, “yes” to the question: Would you like to receive the same treatment again for this problem?

4. Conclusions

Because we detected no aetiological or predisposing factors in the present case, further research is necessary to explain the underlying aetiology and genetics associated with giant lipomas. We consider that the effects of giant lipomas on daily living and quality of life should be evaluated as an indication for surgery, in addition to the lipoma’s anatomic location, size, and risk of malignant transformation.

Ethical approval

Case Report, there is no ethical committee approval.

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Author contribution

OG; Writer, Surgeon. SM; Surgeon. MM; Study design.

Conflicts of interest disclosure

The authors declare no conflicts of interest.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Research registry

Our manuscript is about case report not a research study.
Guarantor

Olcay Guler,MD.

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The English in this document has been checked by at least two professional editors of Textcheck (http://www.textcheck.com/) both native speakers of English.

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