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Case Report

A giant, recurrent, subpectoral breast lipoma: case report

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ABSTRACT

Lipomas are mesenchymal tumors composed of mature fat tissue and are considered one of the most common benign tumors. They are usually small in size, and giant lipomas are rare. The exact etiology of lipoma development is unclear, though several factors have been proposed. Intramuscular or subpectoral lipomas involving the pectoralis major muscle are uncommon. In this report, the author has described the case of a 52-year-old female patient who presented with an uncommon form of subpectoral, giant, recurrent breast lipoma. The patient had undergone a complete surgical excision. The author suggests an individualized assessment and treatment of each case.

Keywords: Breast lipoma, Giant, Recurrent, Tumor

INTRODUCTION

Lipomas are mesenchymal tumors composed of mature fat tissue. They are one of the most frequently diagnosed benign tumors.[1,2] They typically present as slow-growing masses and are more common in overweight people. The usual age of presentation in adults is between 30 and 60 years.[3]

They are normally found in the superficial subcutaneous tissues of the upper limbs, lower limbs and the trunk.[2] Unusually, they can develop intramuscularly, intraosseous, and in the intra-abdominal cavity.[3] Intramuscular lipomas involving the pectoralis major muscle are rare; they may look like breast malignancies on physical examination and on radiological images.[4]

As lipomas are commonly small, big lipomas are referred to as giant lipomas. Moreover, a giant lipoma is defined as a lipoma that measures more than 10 centimeters in any dimension or weighs more than one kilogram.[5]

The precise etiology of lipoma development is unclear, and several factors have been suggested.[6] One of the factors is an acute or chronic trauma, where the lump is usually noticed two to twelve months after the trauma.[7] Other possible etiological factors include endocrine, metabolic, and genetic abnormalities inducing excessive proliferation of mature fat cells.[8]

CASE REPORT

A 52-year-old female presented with a huge and painless mass on the left breast that had been slowly growing over the last five years. She had no associated symptoms in the left arm or symptoms of thoracic outlet obstruction. She denied any history of local trauma. There was no personal or family history of breast cancer. She had undergone a left breast lipoma excision 17 years ago in another hospital which was histologically reported as a lipoma. On physical examination, there was a big left breast lump that was soft, well circumscribed, located at the upper half of the breast, and measured about 15×7 cm, with evidence of a transverse surgical scar over the lump. There was no other palpable mass in any breast, and the axillary lymph nodes' examination was negative bilaterally (Figure 1).

Mammography, breast ultrasound, and a computed tomography (CT) scan chest with IV contrast all showed similar findings, namely, a large, capsulated mass in the

left breast, about 15×15×6 cm, pushing the pectoralis major muscle anteriorly. Normal skin thickness and breast tissue with no evidence of duct ectasia or microcalcification, most likely representing a benign breast lesion, were reported (Figure 2).

Figure 1: Soft huge lump in upper half of left breast.

Figure 2: CT chest showing the location of the tumor in relation to chest wall.

True cut biopsy was obtained from the mass and revealed multiple adipose tissues engulfing skeletal muscle fibers, negative for malignancy. Therefore, the diagnosis of subpectoral giant lipoma of left breast was made.

The patient was counselled, informed consent was obtained, and she agreed to surgical excision of this huge lipoma. She underwent a complete surgical excision under general anesthesia. The surgical incision was made over the previously found transversed surgical scar. A lobulated, encapsulated lesion located between a thin layer of pectoralis major muscle anteriorly and thoracic cage posteriorly was completely excised with preservation of surrounding structures (Figure 3). Post-op period was uneventful. On follow-up after 1-week, surgical site was clean and well healed (Figure 4).

Histopathological examination revealed a well-circumscribed fatty mass measuring 18×8×6 cm consisting of spindle cell lipoma. A two-year follow-up revealed no recurrence evident clinically/radiologically.

Figure 3: The excised specimen of giant lipoma.

Figure 4: Post-operative follow-up after one week showing healed scar.

DISCUSSION

Lipoma is one of the most common mesenchymal tumors, which is composed of mature adipose tissues. It is typically located in the upper and lower limbs and the back.[1,2] Rarely, it is located intramuscularly or sub

muscularly. The patient in this case study presented with a giant lipoma located subpectorally. This location was first described by Simango et al, as a subpectoral, post-traumatic lipoma.[6] Lipomas of the breast are more common than either subpectoral or intramuscular pectoralis major lipomas.[8] Thus, subpectoral or intra-pectoral lipomas are considered to be extremely rare.[3,4,9]

In the current case, the patient had previously excised a lipoma at the same site 17 years ago. Thus, recurrence could be considered a risk factor for this kind of presentation, as in the literature, there is no clear risk factor for sub- and intra-muscular lipoma except trauma.[7] The risk of recurrence mainly depends on the competence of excision.[10,11]

Chronicity of our patient's presentation, low-risk factors of breast cancer, evidence of recurrent tumor, and the clinical and radiological benign features initially reassured us. This was confirmed by histological examination. Due to the rarity of the pathology, subpectoral breast lipomas could resemble benign or malignant lesions clinically or on radiological images, as reported in previous studies.[3,8] Factors indicating the possibility of liposarcoma over lipoma are tumors greater than 10 cm, male gender, and age greater than 60 years.[12]

In the present case, the patient was treated surgically by a complete excision of the tumor by approaching it through an incision made over the previous scar. This is similar to other published studies.[10,11] A complete surgical excision may be performed for aesthetic reasons, symptomatology secondary to the mass effect, or risk of malignancy. Trans-axillary approaches are more commonly described than an inframammary approach.[6] Alternatively, liposuction is considered a safe and more cosmetic option in selected cases with no radiological evidence of a dense and multi-septate connective tissue network.[7] In the case of a lipoma with such radiological features, liposuction is not recommended to avoid residual tissue that may result in recurrence. Before the liposuction approach, the tumor should be biopsied to exclude malignancies, for instance, liposarcoma.[7]

In conclusion, the presentation of our patient with a giant, recurrent, subpectoral lipoma is remarkably rare. It may mimic benign or malignant breast lesions clinically and radiologically. Thus, patients should be evaluated carefully with the standard triple assessment protocol which includes clinical, radiological, and histopathological evaluation to rule out breast cancer. Complete surgical excision or liposuction are the recommended treatment options. The author recommends an individualized assessment and treatment of each case.

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REFERENCES

1. Hobert JA, Eng C. PTEN hamartoma tumor syndrome: an overview. Genet Med. 2009;11(10):687-94.
2. Som PM, Scherl MP, Rao VM, Biller HF. Rare presentations of ordinary lipomas of the head and neck: a review. AJNR Am J Neuroradiol. 1986;7(4):657-64.
3. D'Alfonso TM, Shin SJ. Intramuscular lipoma arising within the pectoralis major muscle presenting as a radiographically detected breast mass. Arch Pathol Lab Med. 2011;135(8):1061-3.
4. Britton CA. Subpectoral mass mimicking a malignant breast mass on mammography. AJR Am J Roentgenol. 1992;159(1):221.
5. Sanchez MR, Golomb FM, Moy JA, Potozkin JR. Giant lipoma: case report and review of the literature. J Am Acad Dermatol. 1993;28(2 Pt 1):266-8.
6. Simango S, Ramdial PK, Madaree A. Subpectoral post-traumatic lipoma. Br J Plast Surg. 2000;53(7):627-9.
7. Signorini M, Campiglio GL. Posttraumatic lipomas: where do they really come from? Plast Reconstr Surg. 1998;101(3):699-705.
8. Su A, Margolies L. Large Subpectoral Lipoma on Screening Mammography. J Radiol Case Rep. 2017;11(9):22-7.
9. Schotman M, van Duijnhoven FH. A man with a swollen right breast. Ned Tijdschr Geneeskd. 2013;157(26):A6149.
10. Gopal U, Patel MH, Wadhwa MK. Intramuscular lipoma of the pectoralis major muscle. J Postgrad Med. 2002;48(4):330-1.
11. Shin JC, Kang BS, Heo WH, Choi KH, Kim EA, Song JH. A giant subpectoral lipoma. Arch Plast Surg. 2014;41(6):782-4.
12. Kransdorf MJ, Moser RP Jr, Meis JM, Meyer CA. Fat-containing soft-tissue masses of the extremities. Radiographics. 1991;11(1):81-106.

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