

Giant Axillary Lipoma

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Lipomas, which are benign tumors composed of mature lipocytes, are the most common mesenchymal soft tissue tumors. They rarely grow beyond 10 cm in their cutaneous localization, which is most often on the trunk and extremities. It is unusual for lipomas to grow larger than a few grams or to present on the axillary region. In such cases, mammography and ultrasonography are typically considered for complete assessment of giant axillary masses. Herein, we report on a 60-year-old woman who presented with an asymptomatic, huge soft tissue mass on the right axillary region. She underwent wide-excision surgery, and the mass was confirmed to be benign lipoma on pathological analysis. In this report, we present our case and review the literature concerning rare giant axillary lipomas.

Key words: breast tumor, giant axillary lipoma, mammography, ultrasonography

INTRODUCTION

Lipomas, which can occur in all parts of the body, are the most common mesenchymal tumors, with an incidence of 10%.¹⁻² Most lipomas are small and weigh only a few grams³ and frequently occur on the trunk and extremities.⁴ However, the axillary region is an uncommon reported localization.⁵ Whether or not they present clinical symptoms, benign lipomas in the axillary region may occasionally grow to a very large volume. According to the definition of a giant lipoma, the tumor must be at least 10 cm in one dimension or weigh a minimum of 1,000 g.⁶ Ultrasonography and mammography are the most useful tools in the differential diagnosis of breast diseases, including lipoma, hamartoma, hematoma, hibernoma, cyst, abscess, and carcinoma. In the clinic, axillary malignancy of breast lesions, particularly those of huge mass, should be excluded first. Differential diagnosis may include lymph node metastases from breast cancer, follicular cyst, nodular fibromatosis, tuberculosis, inflammatory rheumatoid lymphadenitis, fibroadenoma, and fibrocystic



Fig. 1 Preoperative view of patient with a giant axillary lipoma.

change. In this report, we present a rare case of giant axillary lipoma through imaging and pathologic studies.

CASE REPORT

A 60-year-old woman presented with an asymptomatic axillary soft tissue mass that had grown slowly for 9 years. Although there were no symptoms, she worried about the enlarging soft tissue mass. On physical examination in our breast-surgery outpatient department, a palpable, nontender, soft mass filling the right axillary region was observed (Fig. 1). There were no skin changes, and neurological examination of the right upper extremity was normal. A mammogram revealed an 11.0 cm round, radiolucent mass with a visible capsule in the right axillary fossa (Fig. 2). Ultrasonography showed

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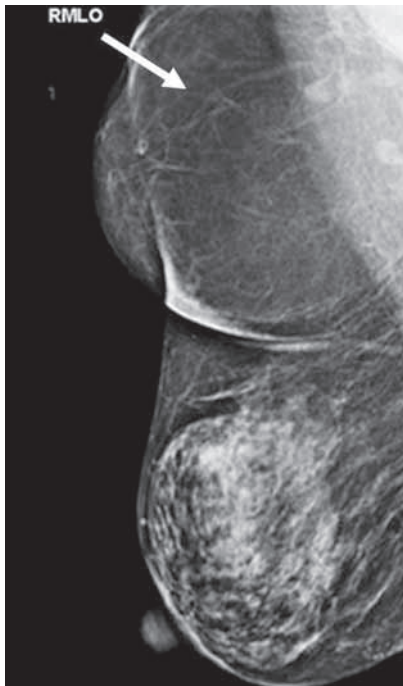


Fig. 2 Mammographic view: an 11.0 cm big, round, and radiolucent mass with a visible capsule (arrow).

a homogeneous soft tissue mass with a circumscribed margin and no involvement of the neurovascular tissue in the right axillary region. The patient underwent wide-excision surgery under intravenous general anesthesia. A skin ellipse was excised to avoid skin redundancy. The resected specimen measured $13 \times 12 \times 4.5$ cm and weighed 792 g (Fig. 3). Histopathological analysis of the mass revealed mature proliferative lipocytes, and it was diagnosed as benign lipoma. She was discharged without any sign of neuromuscular dysfunction, and no recurrence was observed at 2-year follow-up.

DISCUSSION

Lipomas are the most common mesenchymal tumors, accounting for approximately 10 percent of all neoplasms.¹ Lipomas are benign tumors that are composed of mature lipocytes. They can be subclassified according to their histologic features, localizations, and dimensions. Most lesions are solitary and remain asymptomatic on the trunk and extremities. However, subcutaneous giant lipomas on the back, thigh, and forearm regions have been reported.²⁻⁶ Giant axillary lipomas have rarely been reported in the literature. De Andrade presented 31 cases of axillary masses, and only one case of axillary



Fig. 3 Macroscopic view of the specimen (792 g).

lipoma was reported.⁷ In practice, hibernoma should be distinguished from lipoma, especially in the axillary region. The majority of hibernomas are benign tumors with brown fat differentiation that occur in the upper extremities and thigh.⁸

Mammography is often the most useful imaging investigation for women over the age of 35 years presenting with a suspected breast mass. A wide variety of breast diseases, such as lipoma, hamartoma, cyst, fibroadenoma, phyllodes tumor, haematoma, hibernoma, abscess, and carcinoma can present as solitary or multiple giant masses and may appear to have similar features on physical examination. When the features of mammography are less specific, as in chronic inflammation, accessory breast lesion, or lipoma, ultrasound-guided biopsy is a useful method for tissue proof. The typical mammographic manifestation of lipoma shows a completely fatty circumscribed lesion with or without encapsulation.⁹

Ultrasound is particularly useful for identification of the solid or cystic nature of a mass. Sonographic features of normal axillary lymph nodes contain ovoid hyperechoic masses surrounded by a C-shaped hypoechoic rim.¹³⁻¹⁴ Axillary nodular metastases from breast cancer have also been described as hypoechoic masses but with eccentric cortical hypertrophy and obliteration of the fatty hilum.¹⁵⁻¹⁷ Ultrasound examinations have revealed that axillary lipomas are isoechoic to the surrounding fat, and contain a disproportionate amount of axillary fat compared with the contralateral side.

The pathogenesis of the uncontrolled growth exhibited by giant lipoma remains unclear. Histopathological

examination in our case revealed that the lesion comprised mature adipose tissue without breast ducts or acini. It has been proposed that trauma may result in proliferation of adipose tissue, due to rupture of the fibrous septa, accompanied by tears of the anchorage between the skin and the deep fascia.⁶ A lipoma in the axillary region, one of the most moveable parts of the body, is exposed to microtraumas with each movement of the upper extremities.¹²

In the clinic, malignancy should be always considered in breast tumors, particular when the tumor is a huge mass. The differential diagnosis of female axillary lesions includes breast parenchymal lesions such as carcinoma, intraductal papilloma, fibroadenoma, and fibrocystic disease. One of the most important prognostic factors in breast cancer is axillary lymph node metastases from carcinoma of the breast, which should be excluded first. Although the sarcomatous transformation of giant lipoma has been reported, it is extremely uncommon in cutaneous lipoma.¹⁰ Liposarcomas, the most common soft tissue sarcoma in adults, rarely originate in the chest and are usually discovered as large tumors. Myxoid liposarcomas, one of the five major morphological subtypes of liposarcomas, account for 40-50% of these tumors. The management of giant lipoma involves complete surgical excision because of the ease of dissection owing to the typically well-defined pseudocapsule of the giant lipoma. Liposuction and suction-assisted lipectomy also have been reported;¹¹ however, surgical excision is preferred, especially in the axillary region where vessels and nerves could be involved with the gradual growth of a neoplasm.

In conclusion, we present a complete investigation of a rare giant axillary lipoma, including physical examination, mammogram, ultrasound, and gross and microscopic pathology. In the clinic, breast screening is mandatory to differentiate benign anatomical variations of mammary gland extension and malignant breast disease, especially when a patient presents with a giant axillary tumor. Surgical excision is the preferred method to avoid complications of vessel or nerve damage and to ensure a low recurrence rate.

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