

Giant Lipoma of the Breast: A Case Report

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ABSTRACT

Introduction: A giant lipoma of the breast is defined as a benign neoplasm derived from fatty tissue with lesions larger than 10 cm and/or weighing more than 1000 grams. We report this patient due to its rarity and the need for clinicians to have a high index of suspicion while assessing any breast tumour.

Case Presentation: A 50-year-old patient presented with a painless, rapidly growing tumour in her left breast. Physical examination and imaging studies were suggestive of a benign lipomatous breast tumour. The patient underwent surgical excision of the mass, and histological examination confirmed the diagnosis of a giant breast lipoma.

Discussion: Giant breast lipoma is a rare benign tumour that develops in the breast tissue. We observed from this study that if the auxiliary examinations such as ultrasonography, mammography, CT scan and magnetic resonance imaging (MRI) find no evidence of malignant change, any treatment for the breast lipoma is unnecessary, unless the tumour has a harmful effect on life quality of the patient; however, the patient needs periodic physical examination. Giant breast lipomas are often treated with surgical excision to avoid recurrence.

Conclusion: Giant breast lipoma can pose a diagnostic challenge due to its resemblance to various benign or malignant pathologies. Unnecessary invasive investigations can be avoided with better understanding and improved imaging-based diagnosis. Moreover, they are associated with an excellent prognosis after successful excision, except for infrequent tumour recurrence even after several years; therefore, a long-term follow-up is imperative.

KEYWORDS: Case report; Breast mass; Giant breast lipoma; Surgical excision

1. Introduction

Lipoma is one of the most common benign neoplasms derived from fatty tissue [1,2]. Reporting from Nigeria, Ezike *et al*

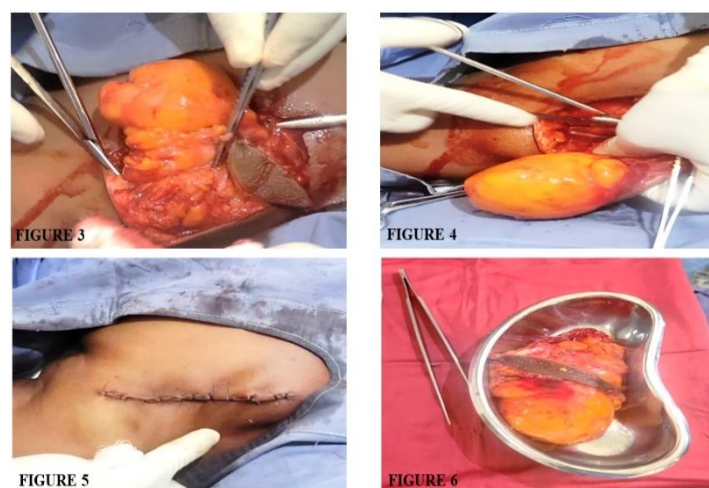
described that the incidence of giant breast lipoma is less than 5% of all lipomas found in the body [3]. However, concerning lipomas generally, a study in Moroccans concluded that 1-4% of lipomas affect the oral cavity [4]. Emegoakor *et al* placed

emphasis on the basis for the malignant transformation of deep-seated lipomas especially those found in the retroperitoneal spaces [5,6]. Lipomas usually develop as well-circumscribed, encapsulated or unencapsulated masses with a doughy feel, that is freely mobile underneath the skin [7,8]. Patients usually seek medical attention over their concerns with size increase, disfiguration, or asymmetry; not to mention the fear of malignancy [7,8]. Breast asymmetry can result from unequal hypertrophy or neoplastic growth, making fatty tumours to be clinically and radiographically difficult to differentiate from hypertrophy [7,9]. Giant lipomas are defined as lesions that have a diameter of at least 10 cm or a weight of more than 1,000 g [7,10]. We present an unusual case of a painless giant lipoma of the left breast that gradually increased in size over 8 years, causing breast asymmetry and cosmetic embarrassment to the patient.

2. Case Presentation

A 50-year-old female trader presented with a painless lump in her left breast that increased in size gradually since onset about 8 years ago. There was no associated nipple discharge, no skin changes, and no axillary swellings. Upon the discovery of the swelling, she did not seek any medical care. However, she was worried about the cosmetic embarrassment caused by the breast lump and the possibility of a cancerous tumour; otherwise, she remained asymptomatic over the period. There was no family history of breast cancer and no significant past medical history. Physical examination revealed an otherwise healthy-looking woman. There was breast asymmetry, and she had a roundish, soft, non-tender, mobile mass, measuring approximately 13cm x 10cm, as shown in Figure 1. A left mediolateral oblique mammogram showed a roundish, well-circumscribed, encapsulated, radiolucent mass of fat density in her left breast. The mass was approximately 12.0cm and there were no associated calcifications as seen in Figure 2. On ultrasound, the mass was homogeneously echogenic with smooth margins. No intralesional vascularity was demonstrated. No enlarged axillary lymph nodes were detected mammographically or sonographically (Figure 2). Surgery was performed under local

anaesthesia and conscious sedation. The tumour was completely enucleated through the incision. The mass weighed 1100g and the resected specimen was a yellowish, elastic, soft, and well-encapsulated mass, measuring 10.5cm in diameter as seen in Figures 3-6. Pathological diagnosis revealed mature adipocytes without evidence of malignancy or lipoblasts, which is consistent with lipoma; as seen in Figure 7. During the follow-up post-operative period covering 12 months, there was no evidence of tumour recurrence.



Figures 3-6 showing perioperative and postoperative images of the left breast lipoma

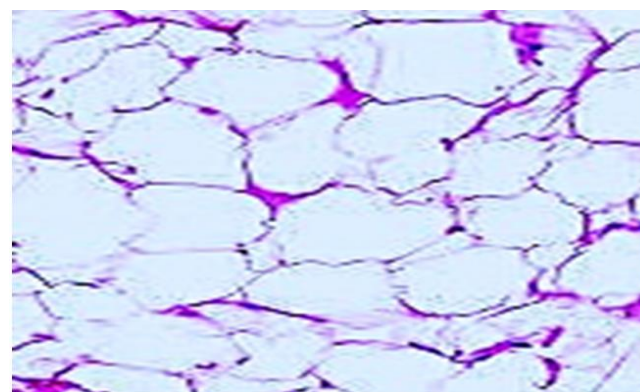


Figure 7: H & E stained sections of the mass showing fat cells (x 100)

3. Discussion

Lipomas are one of the most frequently encountered adipose tumours in clinical settings worldwide. They are usually benign, well-circumscribed, and covered by a thin capsule [11,12]. The aetiological factors for lipomas remain relatively unknown [11-14]. However, literature reports showed that they could be

sporadic or linked to a hereditary factor [11-14]. Usually, they could be found in any part of the body, with a prevalence rate of 2.1 per 1000 people [11,13].

Furthermore, about 20% of lipomas are found in the chest wall, and there is no agreement that the breast is a common site for this pathology [11, 15,16]. Another study submitted that lipoma of the breast is rare, usually benign, and their incidence is approximately 16% of all mesenchymal tumours [17-19]. Seventy percent of cases of lipomas are small in size, solitary with thin capsules and slowly growing [17]. Most patients seek medical advice due to fear of malignancy, and asymmetry of the breast [17] as was found in our case report.

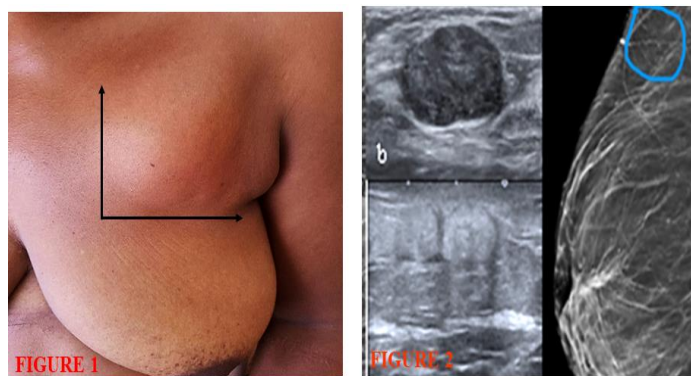


Figure 1 Showing giant lipoma of the left breast.

Figure 2: shows left breast ultrasonographic scan image.

Surprisingly, breast lipomas are found to vary in size, with the vast majority being small in size weighing only a few grams [11,20,21]. However, some literature mentioned that a giant lipoma has a dimension of 10 cm and / or should weigh more than 1000g [10,11] which is similar in dimension and weight to the case being reported.

Ribeiro *et al* in related research, submitted that one of the largest reported lipomas weighed 5700g and measured 35 x 23 x 20 cm, which indicates that lipomas could grow to any large size in the body [11, 21]. Interestingly, breast lipomas are often discrete lesions and they could be difficult to discover within huge or postmenopausal breasts [11,22]. Breast asymmetry or unilateral breast enlargement could be due to physiological hypertrophy or malignancy, requiring a thorough clinical and paraclinical evaluation [7, 16, 23]. Lipomas are frequently benign clinical

entities that often cause diagnostic and therapeutic challenges, especially in the breast, because of its normal fatty composition, making it difficult to distinguish them from other benign or malignant lesions [7, 23].

Also, the use of physical examination of the breast in making diagnosis appears controversial, especially for large or deep-seated tumours [7, 24]. The diagnostic tools for breast lipomas include simple radiography, ultrasonography, computed tomography, or magnetic resonance imaging which can be used for definitive identification [7, 23, 24]. That being said, the presence of missed lipomas during routine mammography in large breasts of post-menopausal patients have been reported [7, 23, 24]. In this case report, the location of the lipoma lesion is at the upper outer quadrant of the left breast, the physical findings and paraclinical studies were relatively easy; ultimately resulting in good clinical diagnosis. To our knowledge, this case is one of the largest breast lipomas reported in the literature for our community.

Furthermore, the ultrasound criteria for diagnosing lipomas consist of oval, lobulated, homogeneous, soft tissue masses with an echogenicity similar to that of normal fat [19]. Also, computed tomography (CT) scan and magnetic resonance imaging (MRI) can differentiate a liposarcoma from a lipoma by large lesion size, presence of thick septa, presence of nodular, and/or globular of non-adipose mass-like areas, and decreased percentage of fat composition [19,25]. Ultimately, a tissue biopsy remains a major histological diagnostic tool for lipomatous lesions, and can differentiate a liposarcoma from a lipoma, especially for relatively large lesions [19,25]. The possible differential diagnoses of breast lipomas include fibroadenoma, phyllodes tumour, ductal papilloma, liposarcoma, and carcinoma [11, 12].

Interestingly, there are several treatment options for subcutaneous breast lipomas including surgical excision and liposuction-assisted removal [19, 25-27]. Most surgical excision for lipomas are curative and the surgeon should ensure that the skin incisions are well placed and meticulously closed,

achieving an acceptable cosmetic result [19, 25-27]. Concerning our case report, a surgical excision was performed, and with a good cosmetically acceptable scar as seen in figure 4-6. Liposuction techniques are not common in our environment because the facilities are not readily available, but elsewhere, liposuction techniques are more attractive because of good cosmetic outcomes [19, 25-27]. However, liposuction is associated with attendant risks, such as skin dimpling, paraesthesia and numbness, pigmentation changes, oedema, and a higher risk of recurrence [19, 25-27]. We conclude from this study that if the supplementary investigations such as ultrasonography, mammography, CT, and MRI find no evidence of malignant change, no treatment for breast lipoma may be necessary, unless the tumour has a harmful effect on the quality of life of the patient [19, 28, 29]. Nonetheless, the patient will need periodic physical examinations [19, 28, 29]. Given that tumour recurrence is often associated with lipomas, even after several years; therefore, a long-term follow-up is imperative [19, 30-32].

4. Conclusion

Giant lipoma of the breast is a rarity in our clinical settings. Also, lipomas of the breast are benign tumours with a very limited risk of malignant transformation. Due to its similarity in texture with breast parenchyma, it is often difficult to differentiate it clinically and radiologically from other common breast lesions. A high degree of clinical suspicion with good histopathological examination is the key to proper diagnosis and management. Moreover, they are associated with an excellent prognosis after successful excision except for infrequent tumour recurrence even after several years; therefore, a long-term follow-up is imperative.

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Author contributions

ABJ conceived, designed, coordinated and read the final draft. ONA, OOS, ASC, KFO, AEA, OAA, and AA participated in its design, manuscript draft, also read and accepted the final manuscript

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