

Case Report
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A Rare Case of Myoid Hamartoma Masquerading As Invasive Breast Carcinoma

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ABSTRACT

Breast Myoid Hamartoma (MH) is a rare type of neoplasm with a poorly understood pathogenesis. Very few literatures have reported such disease with an unclear prognosis and malignant potentiality. Some isolated studies have shown that breast Myoid Hamartoma (MH) may be genetically related to other types of tumours with the involvement of HMGA2 gene. We reported a case of a 64-year-old post-menopausal lady with an underlying chronic idiopathic axonal polyneuropathy (CIAP) that was referred to our centre for a suspected right breast tumour. Clinical and imaging proved the disease to be malignant, however, core biopsy results showed otherwise. Ultrasound of the right breast showed a solid mass with a hypoechoic heterogeneous echotexture and posterior shadowing. A Mammogram highlighted a dense lesion in the right breast with radiolucent halo and macrocalcification. It was reported as BIRADS 4 category. Managing breast Myoid Hamartoma (MH) is proved to be of great challenge to clinicians as meticulous clinical acumen is needed to strategize a proper plan and management, most importantly, not to overlook the disease as the malignant transformation has been reported before.

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Introduction

Breast Myoid Hamartoma is an extremely rare tumour. The incidence was reported as low as 0.7-5% of all benign breast tumours [1]. The pathophysiology of its development is not fully understood. However, with the current imaging and histopathological advances, we may be able to study in detail the behaviour and the curve of the disease. There are several variants of breast Myoid Hamartoma (MH) been described. The variants were determined by the cell types of the tumor, such as glandular or fibro adipose elements [2]. The Myoid variant, predominantly smooth muscle type of cells was seen. Clinically, breast MH is painless, soft to firm lump often with asymmetry. Breast Myoid Hamartoma (MH) is usually well circumscribed with capsule formation. Histologically, the lesion consists of admixtures of smooth muscle stroma, adipose tissue, hyaline cartilage with pseudoangiomatous hyperplasia. The mean age reported for breast MH is around 45 years old with postmenopausal females predominant. It is rarely seen in teenagers. Despite being a benign entity, breast Myoid Hamartoma (MH) has the ability for a malignant transformation and recurrence post excision. Hereby, we would like to report a case of an elderly lady that that was initially diagnosed with a malignant breast tumour that turned out to be a rare case of breast Myoid Hamartoma (MH) [3,4].

Case Report

A case of a 64-years-old, elderly lady with underlying chronic idiopathic axonal polyneuropathy (CIAP), Diabetes type-2, and hypertension was referred to our centre for a right breast lump to rule out malignancy. The patient had been noticing a painless right breast lump with the size of a 'golf ball' for the past few months and claimed was increasing in size. Otherwise, the patient denies having any bloody nipple discharge, contralateral breast lump, constitutional symptoms nor family history of breast malignancy. Clinically, the breast is asymmetrical, inverted right nipple with 'Peau-de-orange' skin changes. There was a non-tender round mass palpable at the right upper-outer quadrant measuring (5x 5)cm in size, well-circumscribed, and has no fixity to the underlying structures. There were no obvious palpable bilateral axillary lymphadenopathies. Our initial diagnosis was right breast invasive carcinoma taking into account the patient's age and clinical findings. The Patient was subjected to bilateral breast ultrasound on the same day. The right breast ultrasound showed a large ill-defined hypoechoic lesion at 9 o'clock position measuring (3.1 x 2.2) cm with peripheral vascularity and posterior shadowing effect. There was also multiple sub-centimetre right axillary lymph nodes noted with preserved fatty hilum and regular cortical thickness. A bilateral breast mammogram was arranged for the patient the following day. Mammogram findings of the right breast exhibit the presence of multiple suspicious groups of pleomorphic calcifications along with a localized dense fibrofatty tissue with BIRADS 4 category.

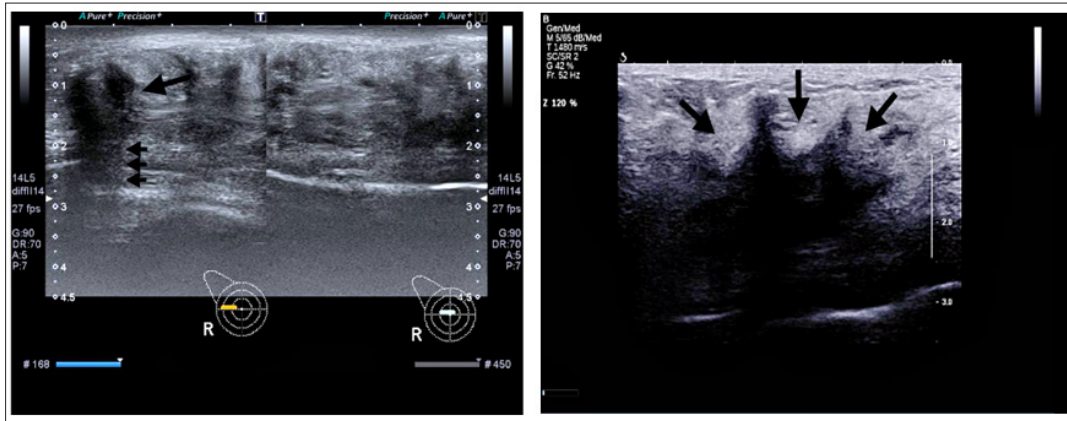


Figure 1: Ultrasound imaging on the left showing the presence of a solid heterogeneous lesion (black arrow) along with posterior shadowing (short black arrows) while on the right depicting the retro mammary lesion with irregular borders (black arrows)

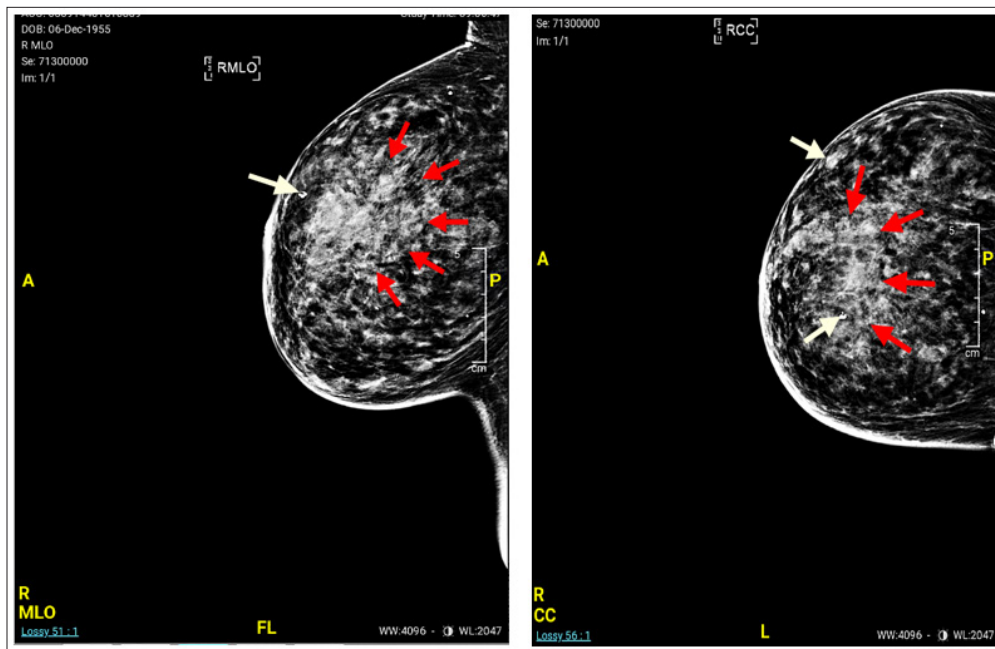


Figure 2: Mammogram images of the right breast. Mediolateral oblique (MLO) and craniocaudal (CC) view showing a dense suspicious lesion (red arrows) with scattered pleomorphic calcifications (white arrows)

We decided to perform a right breast core biopsy in view of suspicious imaging findings. The histopathology report came back as right breast fibrocystic change with Myoid Hamartoma (HM). The case was discussed with the in charged pathologist and the radiologist and a decision were made for a repeat of the core biopsy. Unfortunately, the patient refused the second biopsy and opted for conservative management.

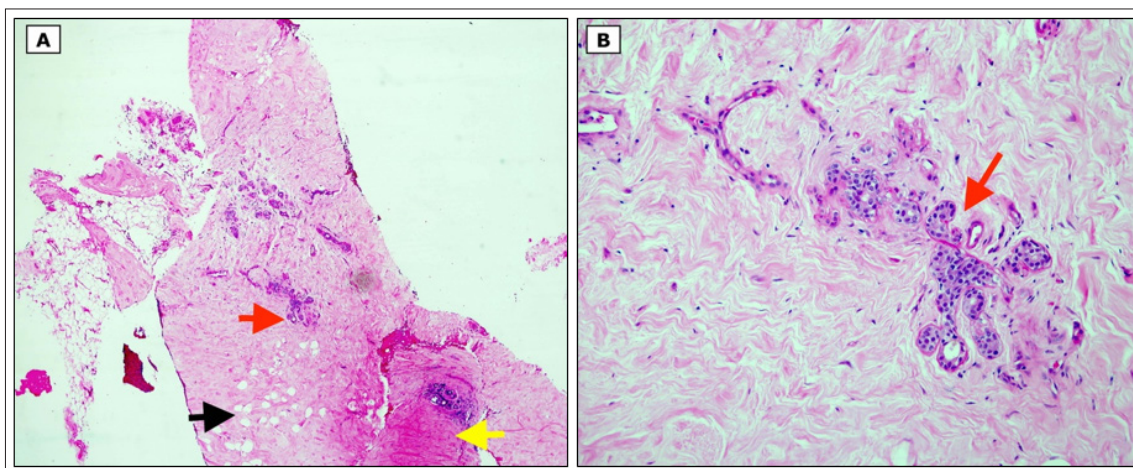


Figure 3: (A) The breast biopsy shows a few breast acini with some dilated ducts (red arrow), smooth muscle stroma (yellow arrow) with entrapped adipose tissue (black arrow) (H&E 40X). (B) The acini are lined by two tiered of ductal and myoepithelial cells (H&E 200X).

Discussion

Breast Myoid Hamartoma (MH) is a rare kind of breast neoplasm. It usually consists of 0.7-5% of all breast benign conditions [1]. It was first described by Davies and Riddell in 1973 [5]. The clinicopathology of the condition is still not fully understood although there were some studies linking the disease with HMGA2 genes [6]. Several types of breast MH has been described based on the predominant tissues found. The tumor is usually solid, well-circumscribed, painless and mobile. Histology examination of a breast MH shows the presence of random and irregularly arranged smooth muscle cells along with ductal, lobular units, adipose tissue, fibrous stroma and bundles of elongated spindle. Breast MH is usually found in postmenopausal women with a mean age of 45 years old [7]. Clinically, breast MH may represent a fibroepithelial tumour such as fibroadenoma however, imaging and biopsy are crucial to rule out malignancy especially in the elderly. Ultrasound features of a breast MH such as heterogeneously well-defined lesion with a hypoechoic feature. However, in this patient, the ultrasound showed a posterior shadow which is a feature of a malignant lesion. A Mammogram is frequently used for aiding the diagnosis which shows a well-circumscribed mass with a radiolucent area covered by a capsule. Core biopsy can be diagnostic in breast MH with typical findings of haphazardly arranged different types of tissues in the breast. The histological characteristics that may point towards dysplasia such as muscle cells with epithelioid features resembling the growth pattern of a lobular invasive carcinoma, glandular components with cystic and atrophic changes with microcalcifications. Treatment of a breast MH is surgical excision of the lesion with a free margin. Although there is a lack of data on the recurrent rates, there has been some literature published regarding the re-emergence of the lesion post excision [8].

Conclusion

Diagnosing a breast Myoid Hamartoma has been proven to be a difficult task as the lesion characteristic and behaviour seems to be incredulous. Although breast Myoid Hamartoma is a benign lesion, clinicians should always have a high index of suspicion in dealing with such pathology as it has the potential for a malignant transformation and recurrence.

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