

Case Report

Large axillary accessory breast hamartoma: a rare entity

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ABSTRACT

Hamartomas are uncommon benign tumours of axilla and breast. They show varied imaging appearances depending upon the proportion of various tissue elements present. The mammographic, ultrasound and elastographic appearances of a case of left axillary hamartoma is described in a 49 years old Indian patient.

Keywords: Accessory breast, Benign tumour, Breast imaging, Mammography

INTRODUCTION

In the clinical literature, only a few examples of mammary hamartomas that arose in accessory breast have been described.¹ The term “hamartoma” was first coined by Arrigoni et al in 1971, while describing a well circumscribed breast lesion with varying amounts of benign epithelial elements, fibrous tissue, and fat.² Many authors consider this entity to be underdiagnosed.³⁻⁵

Pathologically, a distinctive appearance is lacking, and unusual morphological patterns have been described.⁶ More hamartomas are being picked up with the increasing use of diagnostic procedures, including mammography, ultrasound, Fine Needle Aspiration Cytology (FNAC), and needle core biopsy. They are generally found in women above 35 years of age, with size ranging from 10 mm to 170 mm and are presumed to be due to dysgenesis rather than being a true tumours.^{7,8}

Most lesions are asymptomatic and are picked up incidentally, especially the small ones. Lesions if fatty, may remain non-palpable even after reaching up to considerable size, whereas lesions with predominant

fibrous components may simulate fibroadenomas or well-circumscribed carcinomas.

CASE REPORT

A 49 years old Indian female patient presented to integrated breast care center of hospital with complaint of gradual, painless increase in size of left axillary lump for 5 years.

On examination Soft, smooth and mobile lump of size 15 x 10 cm was noted in left axilla. Clinical examination of bilateral breasts and right axilla was normal (Figure 1).

Imaging Findings

Digital mammography of both breasts and axillary regions was done, which included medio-lateral oblique and craniocaudal projections.

On mammography

A well circumscribed, ovoid, isodense mass lesion with interspersed areas of lucencies and scattered high densities

was noted in left axilla; which measured 11.4 x 10 cm. It was not associated with microcalcification and architectural distortion. Findings were consistent with that of hamartoma BIRADS 2: Benign Finding (Figure 2).

A small well-defined lucent lesion with rim of calcification was seen with the aforementioned lesion measuring 2x2 mm, not associated with architectural distortion finding were suggestive of calcified oil cysts. Few benign morphology lymph nodes with central lucent hila were also noted (Figure 2). Both breast and right axilla were unremarkable.



Figure 1: A large left axillary swelling with a prominent superficial vascular channel.



Figure 2: Photograph showing a large left axillary swelling and normal right axilla.

Ultrasound and Elastography was done using Ge Logiq S8 curvilinear and linear probes of frequency 3-5MHz and 9 -12MHz respectively.

Ultrasound

A well-circumscribed, compressible, oval heterogeneously hypoechoic lesion; with large areas that were isoechoic relative to the surrounding fat tissue and multiple scattered hyperechoic areas within corresponding to fibro glandular tissue, with posterior

acoustic shadow only from edges of the lesion was noted in the region of left axilla, which measured 8 x 4.3 cm and was 4 mm deep to skin. These findings were suggestive of left axillary hamartoma, BIRADS 2, benign lesion (Figure 3,4).



Figure 3: Left mediolateral oblique view mammogram.



Figure 4: Ultrasonography (B mode).

Elastography

Although the success of elastographic assessment of hamartomas depends to some extent on their size, the mass must fit within the evaluation box. Lesion described here exceeded the dimensions of the transducer. But elastography was done at the margin of the lesion and compared to adjacent axillary fat.

Lesion showed predominantly blue and light blue colour corresponding to blue and light blue colour of axillary fat with interspersed areas of red colour corresponding to stiff fibro glandular tissue and in region of pseudo capsule formation. Strain Elastography ratio auto calculated by software was 2.4. All these correspond with the benign characteristics of the lesion (Figure 5).

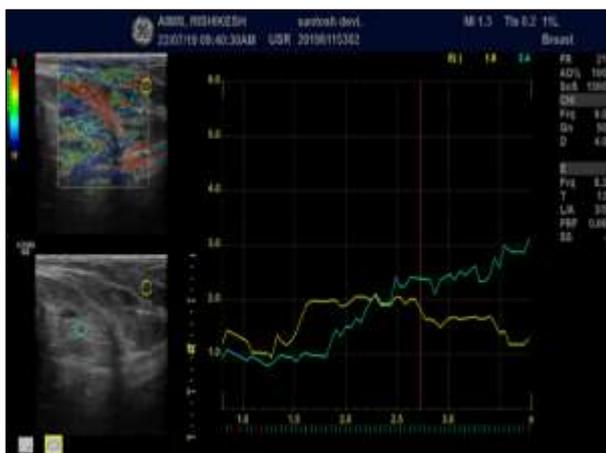


Figure 5: Elastographic images.

Management

In this case the patient was given options for 1. Local excision (as it was large and was posing little discomfort to patient in day to day activities and for cosmetic purposes) 2. Conservative management with annual follow up by clinical examination and imaging. The patient refused surgical intervention and agreed for follow up only.

DISCUSSION

Ectopic mammary tissue is reported to occur in 2-6% of women and is a result of the failure of a portion of the galactic band, running from the axilla to the groin, to regress during embryogenesis. This tissue is subject to the same physiologic and pathologic changes as the breast itself.⁹

Breast hamartoma is a rare neoplasm which accounts for 1.2% of all benign breast lesions and 4.8% of all benign breast tumors. Ectopic breast hamartoma is extremely rare.^{1,4,10,11} To the best of knowledge only few cases of accessory mammary hamartomas have been reported. First, case of hamartoma of ectopic breast tissue in the inguinal region, second unilateral axillary supernumerary mammary hamartoma and third bilateral axillary accessory mammary hamartoma.^{1,12,13}

Hamartomas are named according to the dominant tissue within, such as fibro adenolipoma, lip fibroadenoma and adenolipoma can also be used. If smooth muscles or chondroid element are present they are named accordingly like myoid hamartoma, chondrolipoma. This case was a lip fibroadenoma pertaining to high fat content and scattered glandular tissue.

To identify such lesions and to mention their benign nature is of great importance to prevent unnecessary intervention or surgical procedures. In breast they give breast in a breast appearance on mammograms. If fattier component is present, they will appear as well

circumscribed predominantly lucent with scattered radio dense fibro glandular tissue within. If more fibro glandular tissue is present, they will have more radio dense areas with interspersed fatty lucent areas. They appear well demarcated due to pseudo-capsule formation due to compressed surrounding normal parenchyma.

On ultrasonography hamartomas appear as wider than taller lesions with well circumscribed borders due to pseudo capsule formation with fibro glandular tissue appearing as hyperechoic and fatty tissue as hypoechoic.

Data in the literature are limited on the specific elastographic characteristics of hamartomas, but their consistency and compressibility are known to depend on the amount of adipose tissue they contain, which is highly variable.¹⁴ Mostly colour pattern describes a mass that is less elastic than the tissue that is surrounding it. This appearance may depend on the amount of fibrous tissue present in hamartomas; in fact, the different tissues that make up the breast have distinct elastographic features, with fibrous and glandular tissues displaying greater stiffness than fat tissue.^{15,16} The use of elastosonographic software can be helpful for defining the margins of the mass.¹⁷

Although very rare, if atypical findings like microcalcification or spiculate opacities on mammography or irregular hypoechoic lesions on sonography are present then possibility of malignant transformation needs to be ruled out. As in such cases labelling them as benign will show poor prognosis. Therefore, it is important to be able to recognize suspicious sonographic or mammographic appearances.

In management of hamartoma, cure can be ensured by local excision.⁶ They are not malignant lesions, but cases with recurrence and malignant transformation have been reported.^{4,18,19} Thus, if they are large or recur or malignant transformation is suspected, then excision should be performed. If asymptomatic or was an incidental finding, then follow up can be considered. In this case the patient refused surgical intervention and was managed conservatively.

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REFERENCES

1. Dworak O, Reck T, Greskötter KR, Köckerling F. Hamartoma of an ectopic breast arising in the inguinal region. *Histopathol.* 1994 Feb;24(2):169-71.
2. Arrigoni MG. The identification and treatment of mammary hamartoma. *Surg Gynecol Obstet.* 1971;133:577-82.
3. Fisher CJ, Hanby AM, Robinson L, Millis RR. Mammary hamartoma a review of 35 cases. *Histopathol.* 1992 Feb;20(2):99-106.

4. Daya D, Trus T, D'Souza TJ, Minuk T, Yemen B. Hamartoma of the breast, an underrecognized breast lesion: A clinicopathologic and radiographic study of 25 cases. *Am J Clin Pathol.* 1995 Jun 1;103(6):685-9.
5. Petrik PK. Mammary hamartoma: *Am J Surg Pathol.* 1987;11:234-9.
6. Jones MW, Norris HJ, Wargotz ES. Hamartomas of the breast. *Surg, Gynecol Obstet.* 1991 Jul;173(1):54-6.
7. Rosen PP. *Rosen's Breast Pathology.* 2nd ed. Philadelphia: Lippincott Williams and Wilkins;2001:779.
8. Apple SK, Dascalos JM, Bassett LW. Solid benign lesions of the breast. In: Bassett LW, Mahoney MC, Apple SK, D'Orsi CJ. *Breast Imaging.* Elsevier Saunders;2011;(1):265-268.
9. Giron GL, Friedman I, Feldman S. Lobular carcinoma in ectopic axillary breast tissue. *Am Surg.* 2004 Apr 1;70(4):312.
10. Dyreborg U, Starklint H. Adenolipoma mammae. *Acta Radiol Diagn.* 1975;16:362-6.
11. Charpin C, Mathoulin MP, Andrac L, Barberis J, Boulat J, Sarradour B, et al. Reappraisal of breast hamartomas: a morphological study of 41 cases. *Pathol-Res Pract.* 1994 Apr 1;190(4):362-71.
12. da Silva BB, Rodrigues JS, Borges US, Pires CG, da Silva RF. Large mammary hamartoma of axillary supernumerary breast tissue. *Breast.* 2006 Feb 1;15(1):135-6.
13. Kuroda N, Goishi K, Ohara M, Hirouchi T, Mizumo K, Nakagawa K. Bilateral hamartoma arising in axillary accessory mammary glands: Case report. *Apmis.* 2006 Jan;114(1):77-8.
14. Masciadri N, Ferranti C. Benign breast lesions: Ultrasound. *J Ultra.* 2011 Jun 1;14(2):55-65.
15. Zhou J, Zhou C, Zhan W, Jia X, Dong Y, Yang Z. Elastography ultrasound for breast lesions: fat-to-lesion strain ratio vs gland-to-lesion strain ratio. *Eur Radiol.* 2014 Dec 1;24(12):3171-7.
16. Krouskop TA. Elastic moduli of breast and prostate tissue under compression. *Ultra Imag.* 1991;13:111-34.
17. Goddi A, Bonardi M, Alessi S. Breast elastography: a literature review. *J Ultra.* 2012 Sep 1;15(3):192-8.
18. Tse GM, Law BK, Ma TK, Chan AB, Pang LM, Chu WC, et al. Hamartoma of the breast: a clinicopathological review. *J Clin Pathol.* 2002 Dec 1;55(12):951-4.
19. Lee EH, Wylie EJ, Bourke AG, De Boer WB. Invasive ductal carcinoma arising in a breast hamartoma: two case reports and a review of the literature. *Clini Radiol.* 2003 Jan 1;58(1):80-3.

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