

Case Report

Coexistence of breast hemangioma with fibroadenoma: a rare case report

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ABSTRACT

Vascular tumors of the breast are uncommon and include angiosarcomas and hemangiomas. Angiosarcomas are more common and benign hemangiomas are rare. We report a case of 16 years old female patient with hemangioma of breast coexisting with very commonly occurring breast fibroadenoma. The rarity of literature on breast hemangioma especially coexistent with fibroadenoma, and its importance in differentiation from the more common malignant counterpart, the angiosarcomas deserves mention.

Keywords: Breast hemangioma, Fibroadenoma, Angiosarcoma

INTRODUCTION

Vascular tumors of the breast are as such uncommon and include angiosarcomas and hemangiomas, of which angiosarcomas are more common.¹ Benign hemangiomas are rare usually detected incidentally on microscopy for other indications.² We are presenting a case of 16-years-old female with a breast lump of 6 months duration that was diagnosed as fibroadenoma clinically and cytologically but revealed coexistent hemangioma on histopathology after lumpectomy.

CASE REPORT

A 16 years old female presented to surgery out-patient department with complaint of right sided breast lump detected incidentally on self-examination 6 months back. There was no history of pain or increase in size of the lump, no history of trauma, bleeding, discharge, hormone intake or family history of carcinoma breast. On clinical examination, single well defined, non-tender, firm,

mobile mass of size 5x3cm was noted in upper outer quadrant of right breast. There was no retraction, ulceration of overlying skin and no axillary lymphadenopathy.

On ultrasonography, round hypoechoic lesion with smooth borders, absent acoustic shadows and normal surrounding tissue was revealed; features consistent with fibroadenoma. Mammography showed a well circumscribed smooth bordered mass, no calcification suggestive of fibroadenoma. Fine needle aspiration cytology yielded haemorrhagic aspirate with monolayered sheets of benign ductal cells, dispersed benign bipolar nuclei and fibromyxoid stromal fragments in haemorrhagic background. FNAC features suggestive of fibroadenoma.

Patient went for lumpectomy for cosmetic reasons. For histopathology, we received an encapsulated, firm, reddish brown mass of size 5x3x2.5 cm, revealing slit like spaces on cut section surrounded by reddish brown

areas of congestion. On microscopy, hematoxylin and eosin stained sections from areas with slit like spaces revealed pericanalicular type of fibroadenoma with apocrine change (Figure 1). While sections from reddish congested areas revealed blood filled vascular spaces surrounded by stroma with no cytological atypia (Figure 2). Diagnosis of fibroadenoma with parenchymal hemangioma was made. On follow up, there has been no local recurrence after 6 months of histopathological diagnosis.

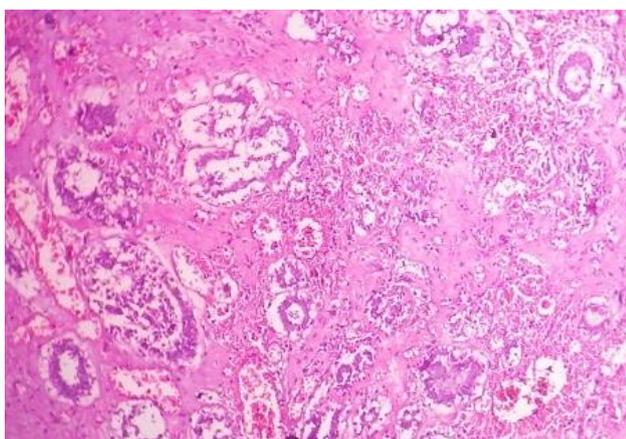


Figure 1: Encircling masses of fibrous stroma around patent or dilated ducts with apocrine change.

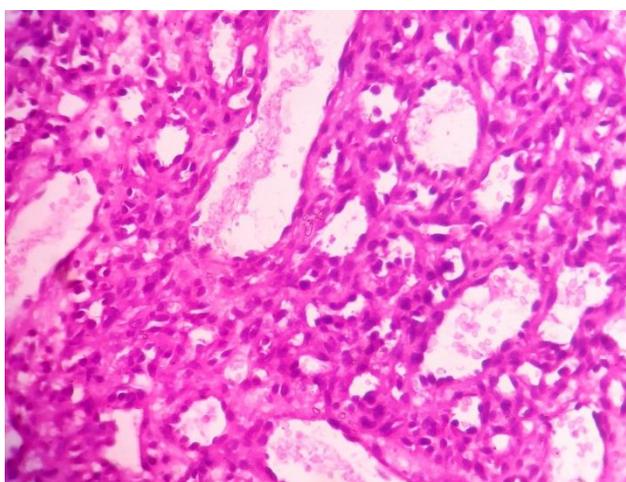


Figure 2: Thin walled vascular spaces lined by flattened endothelial cells and separated by connective tissue stroma.

DISCUSSION

Hemangioma is a rare benign vascular lesion of the breast large enough to be detected clinically. It occurs in patients ranging in age from 18 months to 82 years.³ Its size rarely exceeds more than 2 cm. Reported mammographic appearances of hemangiomas have often described a well-circumscribed macrolobulated lesion that sometimes contains calcifications.^{4,5} Reported sonographic features have been described as well-

circumscribed lobulated solid masses that are predominantly hypoechoic with or without small bright echoes, indicating areas of calcification.^{4,5} Fine Needle Aspiration cytology is inconclusive in most cases and complete excision and histopathological examination is generally required for diagnosis. On gross, it is well circumscribed and may merge with surrounding tissue microscopically but it does not invade or destroy the lobules. There are two histological variants, capillary and cavernous hemangioma, of which cavernous type is more common. Hemangiomas are subdivided into 4 types: perilobular, parenchymal, nonparenchymal or subcutaneous, and venous.^{6,7} Perilobular hemangiomas always occur in the extralobular stroma in the form of microscopic lesions. Parenchymal hemangiomas are microscopically composed of dilated channels filled with red blood cells, and individual vessels of hemangiomas vary in size from capillary to cavernous. Venous hemangiomas are composed largely of venous channels with disorderly vascular proliferation.^{6,7} Nonparenchymal or subcutaneous hemangiomas are located superficial to the anterior pectoral fascia in the subcutaneous fat.⁴ Atypical hemangiomas are benign breast lesions having histological features as above but with broadly anastomosing vascular channels, endothelial hyperplasia, and/or cytological atypia.

Mesurole B et al reported a case involving formation of an enlarging subcutaneous hemangioma following Hormone Replacement Therapy (HRT) that showed partial involution after discontinuation of HRT.⁸ Similarly Dener et al. reported 2 cases involving the development of parenchymal hemangiomas after exogenous estrogen use suggesting a possible role of estrogen in the development of hemangiomas.² However, our patient did not have history of any hormone use, so we could not correlate it with development of hemangioma.

Differential diagnoses of breast hemangioma include angiomatosis, pseudoangiomatous stromal hyperplasia and angiosarcoma. Angiomatosis is a diffuse vascular lesion lacking circumscription.

Table 1: Difference between angiosarcoma and hemangioma of breast.⁶

Angiosarcoma of breast	Hemangioma of breast
Diffuse	Circumscribed
Infiltrates and destroys lobules	Adjacent to and surrounds the lobules
Rarely <2 cm	Rarely >2 cm
Complex anastomoses	Few anastomoses, not complex
Cytological atypia	Focal atypia at the most
Haemorrhage and necrosis	No haemorrhage and necrosis
No muscular walls	Venous hemangioma may have muscular walls

Pseudoangiomatous stromal hyperplasia is not lined by true lining endothelial cells and will not reveal intraluminal red cells. Table 1 outlines the differences between hemangioma and angiosarcoma.

Although benign and not prone to recurrence or progression to angiosarcoma, complete excision is recommended in cases of breast hemangiomas to exclude the possibility of an underlying angiosarcoma.⁹

We conclude that single diagnostic examination is insufficient for definitive diagnosis and complementary of all available techniques is required for diagnosis of breast hemangiomas and differentiating them from the more common malignant counterpart, the angiosarcomas. As breast hemangiomas are uncommon and most of which are of cavernous type usually detected incidentally after biopsy, a thorough examination of the breast tissue should be done for the likelihood of this very rare breast lesion.

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