Haemangioma of the breast
Published on 26.02.2015

DOi: 10.1594/EURORAD/CASE.12403
ISSN: 1563-4086
Section: Breast imaging
Area of Interest: Breast
Procedure: Screening
Imaging Technique: Mammography
Special Focus: Haemangioma Case Type: Clinical Cases
Authors: Furhan Razzaq
Patient: 66 years, female

Clinical History:

A 50-year-old asymptomatic lady attended for her routine screening mammogram. This showed an abnormality for which she required further investigation.

Imaging Findings:

An asymptomatic 50-year-old lady attended for her routine screening mammogram, which showed a small focal superficial non-calcified asymmetric density with microlobulated margins in her right breast (figures 1 & 2). She was recalled to clinic for further assessment of this and ultrasound scan revealed a 10 millimetre echogenic mass corresponding to the mammographic abnormality with fairly well defined borders but no internal colour flow (figures 3 & 4). Ultrasound guided core biopsy was undertaken using a 14G needle. The histology report indicated that this was a vascular lesion, most likely a benign haemangioma, but sarcomatous change was difficult to exclude and the reporting pathologist therefore advised complete surgical excision. This was performed and the final histology confirmed the lesion to be a benign haemangioma rather than anything malignant.

Discussion:

Vascular tumours of the breast are rare but 3 types have been reported: haemangiomas, angiolipomas and angiosarcomas. Haemangioma are quite commonly seen on imaging of various organs, notably the liver, but there are few reports of them in the breast [1-4]. Breast haemangiomas are found in 1.2% of mastectomy specimens [1] and reported in 11% of autopsy specimens, although the vast majority of these were under 4mm in size [2]. Two main types of haemangioma are seen (capillary or cavernous) based on the size of the vessels involved.

On mammography, they usually present as an oval or lobulated smooth mass in the superficial breast parenchyma. Occasional variations on this mammographic appearance include a spiculate mass [1] and fine or coarse calcifications [3]. Sonographically, haemangiomas display a wide spectrum of echotexture from hypoechoic through to hyperechoic [4, 5]. Colour Doppler flow has been reported in some of the cases in the literature [3, 4]. MRI is an increasingly used tool for characterizing breast lesions. There is minimal literature on its utility in breast haemangiomas and reports generally describe them as lesions showing slow delayed enhancement following contrast administration, with draining vessels sometimes being visible. One report of a small haemangioma showed it to have intermediate T1W, intermediate/high T2W signal and avid early enhancement post contrast followed by plateau on the dynamic curve – features which made it difficult to distinguish from a malignancy [6]. Image-guided biopsy is essential to ensure the lesion under investigation is not a carcinoma as the imaging appearances alone are not sufficiently specific. Core biopsy is usually sufficiently reliable to make the diagnosis but if there is any pathological concern about the possibility of sarcomatous change, complete surgical excision is advisable rather than vacuum biopsy. The risk of progression of haemangioma to angiosarcoma is extremely rare if it exists at all,
and therefore surgical excision can be avoided as long as there is no radiological-pathological discordance on the core biopsy result [1].

**Differential Diagnosis List:** Haemangioma of the breast, Epidermal cyst, Fat necrosis, Carcinoma

**Final Diagnosis:** Haemangioma of the breast

**References:**


Description: Right oblique mammogram showing a density in the central breast slightly in the lower half of the breast. Origin: Breast unit, Warrington Hospital, UK.
Description: Right craniocaudal mammogram showing a superficial smooth oval density in the inner half of the breast just below the skin surface. Origin: Breast unit, Warrington Hospital. UK
Description: Ultrasound shows that the mammographic lesion is a 10 mm echobright superficial mass with fairly well defined borders in the lower inner quadrant of the right breast. Origin: Breast Unit, Warrington Hospital. UK
Description: Ultrasound shows that the mammographic lesion is a 10 mm echobright superficial mass with fairly well defined borders in the lower inner quadrant of the right breast. Origin: Breast Unit, Warrington Hospital, UK