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Case Report

Surgery Section

Mammary Hamartoma of the Right Breast: A Case Report

GOPU SOWMYA[1], ALEXANDER MECHERI ANTHONY[2], T RAGHUPATHY[3], RAMALAKSHMI[4]

ABSTRACT

Mammary hamartoma is an uncommon benign breast lesion composed of disorganised but mature mammary ducts, lobules, fibrous stroma, and adipose tissue. Despite its characteristic pathological identity, it is often underrecognised clinically because it can mimic other benign breast masses, such as fibroadenoma and lipoma. A 50-year-old woman presented with a long-standing lump (approximately 35 years) in the right breast that had been first noticed around puberty (approximately at 15 years of age) and had gradually increased in size over time, with associated cyclical mastalgia. There was no history of nipple discharge, skin changes, constitutional symptoms, or family history of breast malignancy. Ultrasonography and mammography demonstrated a well-circumscribed lesion with mixed echogenicity and the classical 'breast within a breast' appearance, with minimal internal vascularity, and the lesion was categorised as Breast Imaging-Reporting and Data System (BI-RADS) III. Trucut biopsy showed benign breast tissue without malignancy. Owing to the persistent and sizeable nature of the lesion, wide local excision was performed. Histopathological examination showed mature adipocytes, ducts, lobules, dense fibrocollagenous tissue, and congested blood vessels arranged in a disorganised pattern, confirming mammary hamartoma. This case highlights that mammary hamartoma should be considered in the differential diagnosis of long-standing, well-circumscribed breast lumps, and that imaging combined with histopathology is essential for definitive diagnosis.

Keywords: Benign breast lump, Breast hamartoma, Breast imaging, Fibroadenolipoma, Histopathology

CASE REPORT

The patient was a 50-year-old woman who presented to the surgical outpatient department with a long-standing lump in the right breast. She stated that she had first noticed the lump around puberty (~15 years of age), when it was small, and that it had gradually enlarged over the years. She reported associated cyclical mastalgia. There was no history of nipple discharge, skin ulceration, skin dimpling, recent trauma, fever, loss of weight, or other constitutional symptoms. She had no significant personal history of breast disease and no family history of breast malignancy. On clinical examination, a lump measuring approximately 6×6 cm was palpated in the upper outer quadrant of the right breast. The mass was well defined, firm in consistency, minimally tender, and freely mobile. It was not fixed to the overlying skin or to the underlying pectoral musculature. The overlying skin appeared normal, with no peau d'orange, erythema, or visible dilated veins. There was no nipple retraction or nipple discharge. No palpable axillary lymphadenopathy was identified [Table/Fig-1].

Radiological evaluation with ultrasonography and mammography demonstrated a well-circumscribed right breast lesion with mixed echogenicity, minimal internal vascularity and the classical 'breast within a breast' appearance; however, the available imaging report did not describe contralateral breast findings, associated microcalcifications, or a separately identifiable pseudocapsule. The lesion was assigned a BI-RADS III category, indicating a probably benign lesion, and the imaging findings were considered suggestive of a breast hamartoma.

[Table/Fig-1]: Asymmetrical breasts.

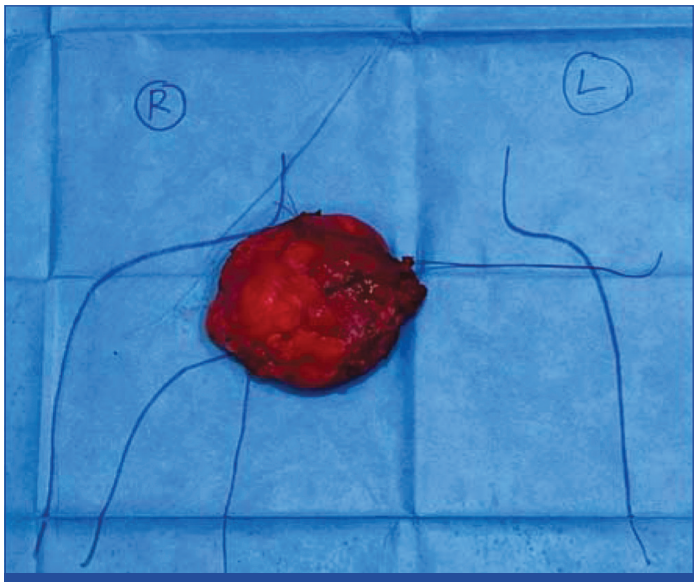
A trucut biopsy was subsequently performed. Histological examination of the core biopsy showed benign breast tissue without evidence of atypia or malignant cells, and the characteristic admixture of adipose tissue, fibrous stroma, and glandular elements was not confidently appreciable on the small sample.

In view of the persistent palpable mass, its size, and the radiological impression of a benign but space-occupying lesion, the patient underwent wide local excision of the right breast mass under local anaesthesia [Table/Fig-2]. Gross pathological examination of the excised specimen showed a mass measuring 15×12×3.5 cm and weighing 368 g [Table/Fig-3]. The microscopic examination revealed a lesion composed of mature adipocytes, ducts, and lobules arranged in a disorganised architecture, along with dense fibrocollagenous tissue and congested blood vessels [Table/Fig-4]. These features were diagnostic of mammary hamartoma. The patient was discharged on postoperative day 3. At 1- and 3-month follow-ups, the patient had an uneventful recovery with satisfactory wound healing, no local complications, and no clinical evidence of recurrence.

DISCUSSION

Mammary hamartoma is an uncommon benign breast lesion composed of variable proportions of normal mammary ducts, lobules, fibrous stroma, and adipose tissue arranged in a disorganised architecture [1]. It has also been described in the literature as fibroadenolipoma, adenolipoma, or lipofibroadenoma, depending on the predominant tissue component [2]. These terms reflect the relative predominance of the constituent tissues within the hamartoma: fibroadenolipoma emphasises the admixture of fibrous, glandular, and adipose tissue; adenolipoma refers to a lesion in which glandular and adipose elements are more conspicuous; and lipofibroadenoma denotes relatively prominent adipose and fibrous components.

[Table/Fig-2]: Intraoperative image.



[Table/Fig-3]: Excised specimen.

[Table/Fig-4]: Histopathological findings of right breast hamartoma (H&E, 40x).

The exact pathogenesis for the development of breast hamartoma is still unknown, but it is said to be a developmental anomaly. They are commonly observed in premenopausal women, but they are known to occur in as young as teenagers. Clinically, they present as painless, mobile, soft-to-firm swellings, mimicking fibroadenomas [3]. On ultrasonography, the lesion may appear as a well-defined, mildly heterogeneous mass with mixed echogenicity or as an ill-defined lesion merging with surrounding breast tissue, making margins difficult to assess [4].

The BI-RADS III categorisation in this patient was also appropriate in the context of a probably benign, circumscribed lesion. Even so, the decision to proceed with trucut biopsy was reasonable because the mass was palpable, persistent, and clinically significant in size. Tse GM et al., added that core biopsy may confirm benign nature but may not always confidently label the lesion as a hamartoma [5].

The excision specimen measured 15×12×3.5 cm and weighed 368 g, indicating that the lesion was substantially larger than suggested by palpation alone. In a case by Bhatia M et al., a 40-year-old woman presented with a gradual, painless enlargement of the right breast. Bilateral mammography (MLO and CC views) demonstrated a characteristic “breast within a breast” appearance, suggestive of a breast hamartoma [6].

Yang Q et al., reported a 21-year-old woman with a gradually enlarging right breast lump that appeared radiologically suspicious (BI-RADS IV on ultrasound, mammography, and Magnetic Resonance Imaging (MRI)), but surgical excision under general anaesthesia revealed a mammary hamartoma, and she remained free of recurrence on 3-month follow-up [7].

The differential diagnosis in such a case includes fibroadenoma, lipoma, phyllodes tumour, and, less commonly, circumscribed carcinoma. Fibroadenoma may resemble hamartoma clinically and radiologically, but hamartoma typically contains a more conspicuous admixture of fat and glandular elements and often shows the characteristic pseudocapsulated ‘breast within a breast’ appearance [5]. Lipoma is usually more uniformly fatty and lacks entrapped ducts and lobules. Phyllodes tumour may be well circumscribed, but is usually more cellular histologically and may show leaf-like architecture [8]. These distinctions matter because management and prognosis differ substantially across these lesions.

CONCLUSION(S)

This case highlights mammary hamartoma as an uncommon but important benign breast lesion that may present as a long-standing, slowly enlarging palpable mass with minimal symptoms. Recognition of its characteristic clinicoradiological features, particularly the classical ‘breast within a breast’ appearance on imaging, can strongly suggest the diagnosis. However, definitive confirmation relies on histopathological examination.

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PARTICULARS OF CONTRIBUTORS:
1. Postgraduate Student, Department of General Surgery, Sree Balaji Medical College and Hospital, Chennai, Tamil Nadu, India.
2. Assistant Professor, Department of General Surgery, Sree Balaji Medical College and Hospital, Chennai, Tamil Nadu, India.
3. Professor, Department of General Surgery, Sree Balaji Medical College and Hospital, Chennai, Tamil Nadu, India.
4. Professor, Department of General Surgery, Sree Balaji Medical College and Hospital, Chennai, Tamil Nadu, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:
Dr. Alexander Mecheri Anthony,
Assistant Professor, Department of General Surgery, Sree Balaji Medical College and Hospital, Chennai, Tamil Nadu, India.
E-mail: dr.alexanderantony@gmail.com

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