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Breast Hamartoma: A Rare Tumor in a Breastfeeding Patient

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Abstract

Breast hamartoma is an unusual benign tumour that grows slowly over time. The present study concerns a 40-year-old breastfeeding lady who presented with a large mass in her left breast that gradually grew over the course of 2 years. Breast ultrasound and MRI were favourable for breast hamartoma.

Keywords: Breast; Hamartoma; Ultrasonography; Magnetic resonance imaging

Introduction

Breast hamartoma (also known as breast fibroadenolipoma) is a benign type of breast neoplasm. It is secondary to a benign proliferation of epithelial cells, fatty and fibrous tissues encased in a thin capsule. Medical imaging plays a significant role in establishing the diagnosis. The treatment modality is surgical intervention [1].

Case Presentation

A 40-year-old lactating woman presented to the radiology department with a noticeably large, palpable mass in the left breast. She stated that it had been present for 2 years and had gradually increased in size. No history of breast lumps has been reported. During the inspection, when compared side by side, the left breast was significantly larger. No skin or nipple changes were observed, and there were no palpable axillary nodes. Breast ultrasound revealed a well-circumscribed mass with mixed echogenicity composed of fatty and fibroglandular tissue similar to that found in the normal breast (Figure 1). MRI examination revealed a well-circumscribed oval mass that was isointense to muscle on T1-weighted sequences with a few hyperintense foci. On T2-weighted sequences, the mass was heterogeneously isointense or hyperintense relative to the surrounding gland tissue. A thin, hypointense peripheral rim was detected on both sequences. No restriction on diffusion-weighted imaging (DWI) was noted. On dynamic contrast-enhanced scans, the mass appeared to be non-enhancing except for some foci showing slow, progressive enhancement (Figure 2). Mammography was not performed since our patient was breastfeeding.

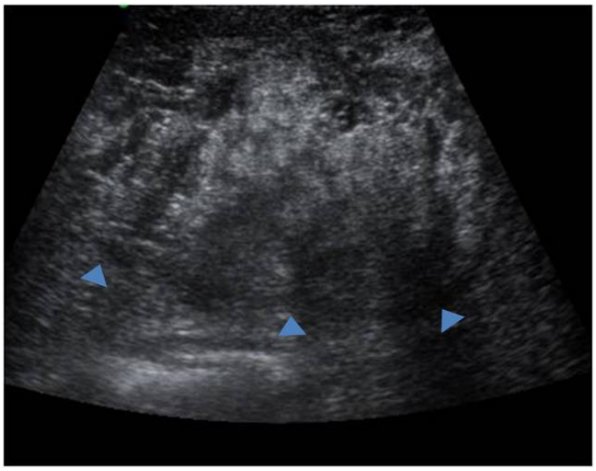

Figure 1: *Ultrasound section of the left breast showing a well-encapsulated mass (arrowheads).*

Discussion

Breast hamartoma, also known as fibroadenolipoma, is a benign type of breast tumour. It was first described by Arrigoni et al. in 1971 as a well-circumscribed lesion composed of benign epithelial cells, adipose, and fibrous tissues. Women older than 40

years of age are most likely to be affected [1]. Hamartoma can occur in younger and older patients; however, this tumour will always develop before menopause [2]. Additionally, Venkatesh and Harish reported a case of it occurring in a 14-year-old girl. This shows that it can happen at any age [3]. Although hamartoma typically grows slowly, a faster growth rate was reported during pregnancy and lactation. Immunohistochemical similarities to normal gland tissue play a major role (positive for hormone receptors and KI67). A few rare cases have also been reported in males and in ectopic mammary tissue observed in inguinal or axillary areas [4].

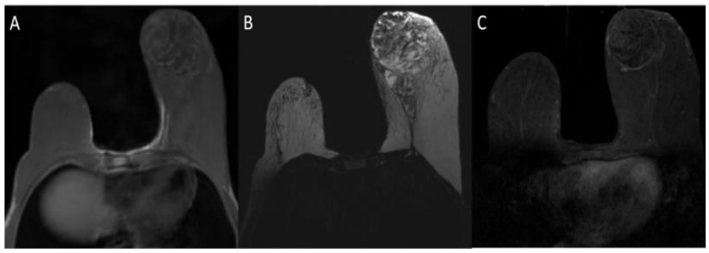

Figure 2: *Breast MRI: (A) T1 and (B) T2WI showed a well-circumscribed oval mass of the left breast, surrounded by a thin capsule, with a fat and glandular component; (C) On dynamic post-contrast T1WI FS subtracted images, the mass did not enhance except for some foci showing slow progressive enhancement.*

Hamartomas are habitually benign, but there is a chance that they could become cancerous. Excision and histological examination should be used to rule out the possibility of malignant transformation. For example, in Cowden disease, which is a rare autosomal dominant disorder caused by mutations in the PTEN onco-suppressor gene or related genes, there is an increased risk of breast, thyroid, and endometrial neoplasia [1-4]. In the clinical setting, hamartoma manifests as an asymptomatic mass or unilateral breast enlargement without a palpable lump [1]. Some bilateral forms have been described, and the onset of signs can vary from two months to two years [2].

Their mammographic appearance is that of ovoid masses with a heterogeneous parenchymal density consistent with both soft tissue and lipomatous elements, bordered by a thin radiolucent halo. Benign calcifications can be visible. Even though large hamartomas can displace adjacent tissue and show mild compression, they do not induce architectural distortion [5]. They also show lobular densities inside the surrounding fat, giving them a "slice of salami" appearance. In the presence of spiculated opacities or pleomorphic calcifications, malignancy should be suspected [3]. On ultrasound, they appear as well-circumscribed masses with a thin peripheral capsule. They feature a heterogenous echotexture that includes both hypoechoic and hyperechoic areas compared to the surrounding parenchyma. On colour Doppler, they are usually avascular and have a firm consistency on elastography. The degree of compressibility is proportional to the amount of adipose tissue present and is also a feature of benign breast lesions [5].

When a mammogram shows a round mass with a radiolucent halo and an ultrasound shows an oval, heterogeneous mass surrounded by an echogenic or echo-lucent ring, hamartoma is confirmed [1]. On MRI, all of the mass's constituents can be discerned on various sequences, making them easy to diagnose. This makes it an extremely useful imaging technique. They appear very much like another breast within the breast (the breast within the breast sign). Since both fat and soft tissues are present, they show mixed signal intensities on T1WI and T2WI. Typically, the rim of pseudocapsules will be hypointense. They exhibit a gradual and progressive enhancement with a type I kinetic curve following dynamic post-contrast. The enhancement may be similar to that of normal breast parenchyma. They do not show restriction on DWI, and ADC values are high. Similar to the normal breast, spectroscopy will detect water and lactate peaks along with a low choline level [5]. Core biopsy and US-guided needle biopsy are unable to provide a diagnosis as there are no distinctive features capable of characterizing the lesions. However, surgical removal can identify the typical histological characteristics [4]. Usually, total excision is the therapy of choice, but recurrence is seen in approximately 8% of cases that have been reported [1].

Conclusion

Breast hamartoma is a rare benign tumour that usually occurs after the age of 40. Imaging helps in making the diagnosis. The risk of malignancy is very low, but surgical resection is always indicated.

Author Contributions

All authors contributed equally to this work.

Patient consent

Written informed patient consent for publication has been obtained.

Conflict of Interests

The authors declare that there is no conflict of interests regarding the publication of this paper.

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References

1. Deshmukh S, Fulare S, Nagre A, Chowksey S. Breast hamartoma: An underrecognized entity. Indian J Case Rep. 2018; 4: 412-413.

2. N'timon B, Darre T, Dagbe M, Gbande P, Amadou A, Tchaou M, et al. Giant breast hamartoma: a case report in Togo. Open J Radiol. 2018; 8: 30-36.
3. Ghaedi Y, Howlett D. Giant left breast hamartoma in a 45-year-old woman. BMJ Case Rep. 2018; 30.
4. Cucci E, Santoro A, Di Gesu C, Ciuffreda M, Maselli G, Pierro A, et al. Integrated imaging of breast hamartoma: two case reports. Breast Dis. 2015; 35: 53-7.
5. Yadav P. Imaging of breast hamartoma on mammography, ultrasound and MRI. J Clin Diagnostic Res. 2019: 13.