

Pilomatixoma of the Breast in a Male Patient

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Abstract

Calcifying epithelioma of Malherbe or better known as pilomatixoma is a benign skin/subcutaneous neoplasm originating from the hair matrix cells. It is mostly diagnosed in the head, neck, and upper and lower extremities. Only few cases in the breast have been reported in the literature. Also, it is more common in women and young patients. Imaging findings of pilomatixoma of the breast can overlap with those of malign lesions. Here, we report a very rare case of pilomatixoma of the male breast and its clinical, mammographic, and sonographic features.

Keywords: Breast, pilomatixoma, Malherbe tumor, ultrasound, mammography

Case

A 42-year-old male patient was referred to our clinic with a complaint of a palpable mass in the right breast for 2 years. On physical examination, there was a retroareolar painless and firm lump located in the right breast. No skin abnormalities and axillar lymphadenopathy were observed. Mammography revealed a well-circumscribed approximately 3x2-cm sized oval density with coarse and fine pleomorphic calcifications in the centrally located lesion in the right breast (Figure 1). The lesion on sonography had a heterogeneous echo pattern with significant acoustic shadowing due to calcifications in the mass. On color Doppler ultrasonography (CDUS), minimal internal vascularization was observed (Figure 2). With these findings, the lesion was classified under BI-RADS 4 category, and the histopathological diagnosis using Tru-Cut biopsy and excisional biopsy was pilomatixoma (Figure 3).

Discussion

Although the first case of pilomatixoma was defined by Dr. Chenantals Malherbe in 1880, the term pilomatixoma was introduced by Forbis and Helwig in 1961.¹ Pilomatixomas are benign epithelial tumors originating from the hair follicle. The etiology of pilomatixoma has not yet been clearly determined, but it is thought that it may be related to the inflammatory process as a result of repetitive traumas.²

Pilomatixoma is usually seen in the first 2 decades of life. Another incidence peak is described in 5-6 decades.³ It has been mostly detected in the head and neck region but rarely reported in breast (1:100 000), especially in males.^{1,2}

Generally, these lesions that are located on the skin are easily diagnosed, but breast localization is misinterpreted as a malignancy. Therefore, the findings of clinical examination, radiological imaging, and histopathology should be evaluated together. On clinical examination, there can be an asymptomatic palpable firm mass varying from 1 cm to 3 cm in diameter. The overlying skin can be normal or inflamed. On mammography, these lesions are often seen as amorphous, well-defined, and circumscribed lesions with irregular coarse calcifications that can increase in size over time (American college of Radiology BI-RADS IV). On sonography, the lesions are irregularly demarcated and hypoechoic in character, echogenic foci can be detected in their internal structures, and these often produce posterior acoustic shadowing. On CDUS, interval vascularization can be observed. Because these imaging features are similar to malignant lesions, definitive diagnosis is confirmed by histopathology.^{2,3,4}

The differential diagnosis group of breast pilomatixomas is large, and it is difficult to differentiate the conditions from each other. This group includes skin lesions, such as seborrheic keratosis and inclusion cyst, ductal hyperplasia, adenosis apocrine metaplasia, papillomas, lobular neoplasias, fat necrosis, and

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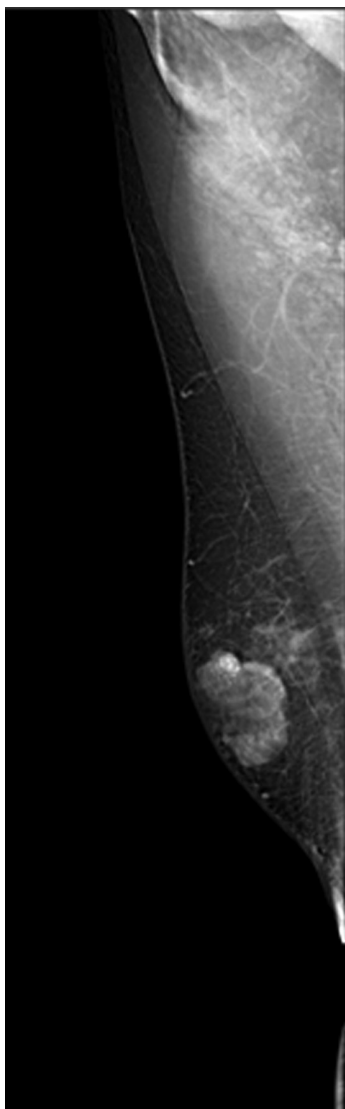


Figure 1. Mammography mediolateral view of the right breast shows an approximately 3x2-cm sized well-circumscribed, centrally located, oval density with coarse and fine pleomorphic calcifications.

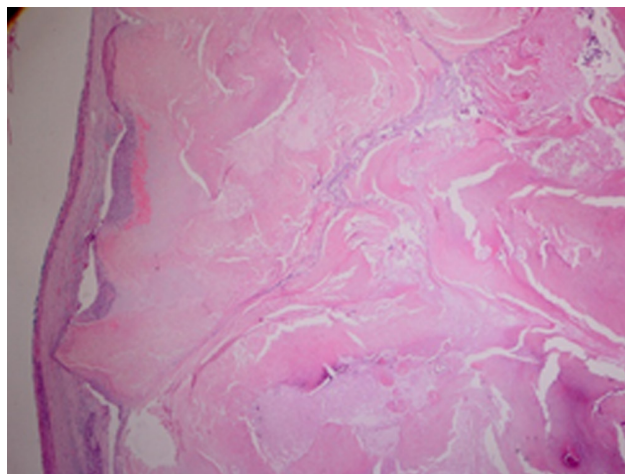


Figure 3. Histopathological diagnosis using Tru-Cut biopsy followed by excisional biopsy was reported as pilomatrixoma.

invasive ductal carcinoma. Some of them have imaging findings similar to those of pilomatrixoma. So, the lesions must be evaluated both clinically and histopathologically.³

Treatment of pilomatrixoma can be done at 6-, 12-, and 24-month intervals through a conservative method, or pilomatrixoma can be removed exclusively. Although the probability of malignant degeneration is extremely rare, a few cases of pilomatrixoma carcinoma have been described in the literature. In these cases, the lesions become symptomatic and surgical excision is required for treatment.^{2,5}

Conclusion

Pilomatrixomas in the breast of male patients are extremely rare entities. Due to imaging findings overlapping with those of malign neoplastic lesions, pilomatrixoma can be easily misdiagnosed as a breast neoplasm. So, radiologists must be careful and must carry out differential diagnosis of the breast lesions.

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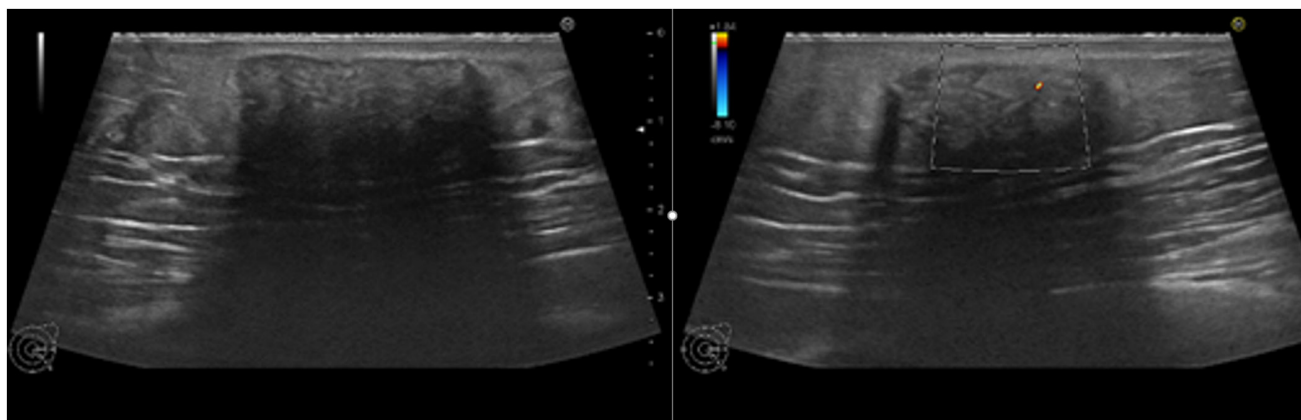


Figure 2. On sonography, it was found that the lesion had a heterogeneous echo pattern and showed significant acoustic shadowing, and in color Doppler ultrasonography (CDUS) examination, minimal internal vascularization was detected.

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