Cavernous Hemangioma in the Breast

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ABSTRACT

Although the observation of breast vascular tumors is rare, the most common tumor is hemangioma in the benign group, and these tumors are observed incidentally in lumpectomy or mastectomy specimens during histological examinations. They are classified into capillary, cavernous, and venous hemangiomas. Cavernous hemangioma is the most common subtype. Cavernous hemangiomas are benign vascular tumors, which malformation from mature blood vessels. Hemangiomas in the benign group may show a suspicion of ductal carcinoma in situ (DCIS) in mammographic analysis. Ultrasonography (US) and magnetic resonance imaging (MRI) are the most useful imaging methods for analyzing the structure of breast vessels. In this case, a 54-year-old female who have any complaint. Scanning mammography (MG) detected the tumor, but physical examination and US could not identify the mass. According to the MG analysis, the lesion was evaluated as BIRADS 4b, and the patient underwent excisional biopsy after wire localization. Pathological analysis revealed cavernous hemangioma.

Keywords: Cavernous hemangioma, breast, ultrasonography

Introduction

Benign or malignant mesenchymal tumors of the breast are rare (1). Vascular tumors in the breast are usually classified as angiosarcoma or hemangioma (2-4). These lesions may present as a palpable mass or might be detected incidentally (5). Hemangiomas are benign vascular lesions of the breast. Cavernous hemangiomas are the most common type of breast hemangiomas (6). In this case report, a non-palpable cavernous hemangioma that was detected by screening mammography is discussed.

Case Presentation

The screening mammography of a 54-year-old female patient who did not have any complaints revealed a 14 x 13 mm lesion with microlobulated borders in the upper quadrant of the left breast, in another health center. This lesion was not detected on ultrasonography (USG), and the patient was referred to our center. Physical examination of her breast and axilla were normal. The patient was radiologically re-evaluated due to a lack of any significant risk factors for breast cancer, and discordance between imaging results. The lesion was not identified on repeat USG, and a single exposure digital MG (single mediolateral-oblique, MLO) was obtained. The lesion was interpreted as BIRADS 4b within a lipomatous breast tissue (Figure 1). The lesion was localized by a guide-wire on mammography, and excisional biopsy was performed since the lesion was non-palpable. The wire was observed to progress easily through the lesion. The operation was uneventful. It was noticed that achieving hemostasis within the lipomatous breast tissue took relatively long for a biopsy procedure. Histopathological examination of the excisional biopsy specimen revealed a cavernous hemangioma (Figure 2).

Discussion and Conclusion

Hemangiomas are benign vascular tumors that arise from malformation of mature blood vessels, and are usually incidental findings on histologic examination of a lumpectomy or mastectomy specimen (7). Although hemangiomas are benign, Shi et al. (8) have stated that they may lead to suspicion of ductal carcinoma in situ (DCIS) due to calcifications on mammography as a result of phlebolith formation.

Figure 1. Mammography

Figure 2. Histopathology

However, needle biopsy showed the lesion to be cavernous hemangioma (9).

Gopal et al. (10) have reported a hemangioma that clinically mimicked inflammatory cancer. Patients have a wide range of age distribution with a higher frequency in females (11). They can be located anywhere within the breast. They are classified as perilobular, parenchymal, subcutaneous and venous according to their origin. The more common classification includes capillary, cavernous or venous types. Perilobular hemangioma is generally small and non-palpable (12). Cavernous hemangioma is the most common subtype (6).

The clinical diagnosis of breast hemangiomas is difficult. Physical examination is important for diagnosis. Cavernous hemangiomas may present as a lump according to size and location of the tumor, however, palpable and symptomatic vascular tumors are generally angiosarcomas (7). It is important to differentiate these lesions from angiosarcoma or malignant lesions of the breast. It may be localized within the breast parenchyma or fat tissue. Grossly, they are dark red or brown, spongy, well circumscribed lesions (2). Macroscopically hemangiomas reaching up to 6 cm have been reported. Perilobular hemangiomas are detected in 10% of autopsy series, and 1% of mastectomy specimens (13). Rosen and colleagues reported 15 hemangiomas, 7 to 50 mm in diameter, in patients between 10 and 67 years (14-16). In this study, it was stated that even small lesions can be clinically palpable, however, the lesion was not palpable in our case.

Although the diagnosis can be made by ultrasound and mammography findings, along with magnetic resonance imaging (MRI), it is usu-

ally established by histopathological examination. Hemangiomas can grow over time. They should be considered especially in patients with hormone replacement therapy, and be evaluated by MRI.

On ultrasonography, cavernous hemangiomas might present as solid, hypoechoic or cystic areas with small bright echoes due to calcification and fibrous septations (17-19). However, it may be isoechoic with surrounding tissue thus remaining undetected. In such circumstances, MRI may be beneficial.

In our case, screening MG showed a 14 mm, microlobulated lesion in the upper quadrant of the left breast that was non-palpable on physical examination. The lesion was considered as BI-RADS 4b due to microlobulation and absence of the lesion in previous studies. It was excised with wire guidance. Breast hemangiomas may rarely present as clinically detectable lesions before reaching large sizes, as in our case.

Informed Consent: Written informed consent was obtained from the patient.

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