A 20-Year-Old Woman With a Well-Circumscribed Lump in the Left Breast

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A 20-year-old Hispanic woman presented in the breast clinic with a gradually increasing lump in the left breast that she had first noticed 2 years earlier. There was no history of preceding trauma. She complained of associated breast pain coinciding with her menstrual cycles. There was no history of nipple discharge or any changes of the overlying skin. Her other medical history and family history were insignificant. On physical examination she was found to have a well-defined, firm, mobile, nontender mass that measured 3 × 3 cm in the inner lower quadrant of the left breast. No lymphadenopathy was present. An ultrasound of the breast revealed a solid mass, with features of a fibroadenoma. A fine-needle aspiration biopsy was performed on the mass. Cytology revealed 3-dimensional groups of ductal cells in a background of myoepithelial cells and stromal cells, consistent with a fibroadenoma. Though the benign nature of the lesion was explained to the patient, she desired an excision because of the associated pain in her breast.

The mass was excised and sent to pathology. Gross examination of the excised mass revealed a relatively well-circumscribed lesion measuring 3 × 3 × 1.5 cm; the specimen was soft in consistency.

Microscopic evaluation revealed a well-circumscribed tumor with prominent hyperplasia of the lobules. The normal architecture of the lobules was maintained (Figure 1). The stroma showed significant sclerosis that was more prominent at the periphery (Figure 2). No cellular atypia or increased mitotic activity was observed in the lobules or the stroma. There were no microcalcifications identified in the lesion. A single microscopic focus of incipient fibroadenoma in the surrounding breast was identified (Figure 3).

What is your diagnosis?

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Pathologic Diagnosis: Sclerosing Lobular Hyperplasia

Abstract

We discuss a case of sclerosing lobular hyperplasia, an uncommon benign lesion of the breast. It occurs in young female patients, often of African American heritage. The incidence is about 3%. The patients may complain of pain associated with the lump. These lesions are usually not associated with microcalcifications. Grossly, they present as a well-circumscribed lump in the breast. Microscopically, they are composed of enlarged lobules of the breast that maintain architectural resemblance to normal breast tissue. No morphologic atypia is present in the lobules or the adjacent stroma. They may coexist with fibroadenoma. When they coexist with fibroadenomas, often the fibroadenoma overgrows the sclerosing lobular hyperplasia. Thus, this lesion may be seen in breast biopsies excised for fibroadenoma. Surgical excision is curative.

Sclerosing lobular hyperplasia is a form of fibroproliferative lesion, most common in young women (20–46 years of age) of African American ancestry. A single case has been reported of the condition occurring as bilateral masses in an elderly woman after reduction mammoplasty.1

Sclerosing lobular hyperplasia is an uncommon lesion that occurs at approximately one third the incidence rate of fibroadenoma. The low frequency of its diagnosis could be attributed to its being overlooked by the pathologist, because it may coexist with fibroadenomas. Kovi et al2 reviewed 590 benign breast lesions diagnosed in their institution during a period of 6 months and found that 18 (3%) of them were instances of sclerosing lobular hyperplasia. A few of them showed an incipient, lobule-sized fibroadenoma. Of the remaining 101 fibroadenomas, 47 (46.5%) were found to be surrounded by breast tissue exhibiting focal sclerosing lobular hyperplasia. They hypothesized that when these lesions coexist, one lesion tends to overgrow the other, and more often sclerosing lobular hyperplasia is overgrown by fibroadenoma.

Sclerosing lobular hyperplasia is a benign lesion and is not associated with an increased risk for carcinoma of the affected breast.3 Although sclerosing lobular hyperplasia and fibroadenoma are clinically similar, morphologically they are different. Fibroadenoma arises from the ducts and stroma of the terminal duct lobular unit of the breast, resulting in loss of the lobular architecture. In contrast, sclerosing lobular hyperplasia maintains the architectural integrity of the breast tissue. The lesion consists of enlarged, easily recognizable lobules.

The stroma is composed primarily of spindly fibroblasts. There is no cellular or architectural atypia of the lobules or stroma. The lesion may be subjected to fine-needle aspiration. The cytology is characterized by presence of uniform, round to oval populations of epithelial cells arranged in flat sheets and acinar (rosette-like) arrangement.4 On reviewing the cytology slides in this case, we found features similar to that of a fibroadenoma; however, a few acinar structures were seen (Figure 1).

Although benign, these lesions may present as painful breast masses. They maintain lobular architecture and can coexist with overt or incipient fibroadenomas.

References