Leiomyoma of breast: a report of rare case

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ABSTRACT

Leiomyoma is a benign smooth muscle neoplasm. They can occur in any organ, but the most common forms occur in the uterus, small bowel and the esophagus. Leiomyoma of breast is a rare benign non epithelial tumor. Most leiomyomas in the breast are found in the subareolar region. There are few cases being reported in the literature. Here we report a case of 52 years old lady who presented to us with a painless right sided breast lump. There was no history of nipple discharge, trauma or use of oral contraceptive pills. Excisional biopsy revealed a growth pattern of interlacing fascicles of smooth-muscle cells consistent with leiomyoma of breast.

Keywords: Breast, leiomyoma, lump.

INTRODUCTION

Leiomyoma is a benign smooth muscle neoplasm, which most commonly occurs in the uterus, small bowel and the esophagus. Leiomyoma of the breast is a rare benign non epithelial tumor.[1] Most leiomyomas that occur in the breast are found in the subareolar region.[2] Leiomyoma of the breast parenchyma in the absence of periareolar lesions is uncommon.[3] Thus we are presenting such an unusual and rare case of leiomyoma of breast.

CASE REPORT

A 52 year old lady complaining of right breast lump came to surgery OPD of Nepal Medical College and Teaching Hospital. The lump appeared one year ago and grew slowly with no pain or fever. There was no history of nipple discharge. She didn't have any breast trauma. She never took oral contraceptive drugs. She didn't lose weight over that period. She had no family history of breast cancer. Physical examination revealed a well defined mobile mass of 4×5 cm^2 in the right upper quadrant of right breast. It was firm and non tender with smooth surface. Axillary or supraclavicular lymph node was not palpable. Fine needle aspiration cytology revealed benign mesenchymal tumor. Under local anesthesia, excisional biopsy of the lesion was performed.

Gross examination of surgical specimen revealed a well encapsulated 4×5 cm^2 mass free from underlying breast tissue and overlying skin (Fig.1). The cut surface appeared to be homogeneous and white with glistening surface. Histopathological examination revealed a growth pattern of interlacing fascicles of smooth-muscle cells consistent with leiomyoma of breast (Fig.2). Post operative period was uneventful and there was no complaint on subsequent follow up after three months.

DISCUSSION

Leiomyomas of the breast are extremely rare.[3] Strong, in 1913, is credited with the early descriptions of leiomyoma of the mammary gland.[4] There have been relatively few such reports since Strong's initial description. Most mammary leiomyomas are subareolar.[2] Various theories have been proposed about the origin of this neoplasm. Kaufman *et al*[2] suggested that they arise from the smooth-muscle cells that surround capillaries

Fig.1. Photograph of cut surface of surgical specimen showing well encapsulated mass with white glistening surface.

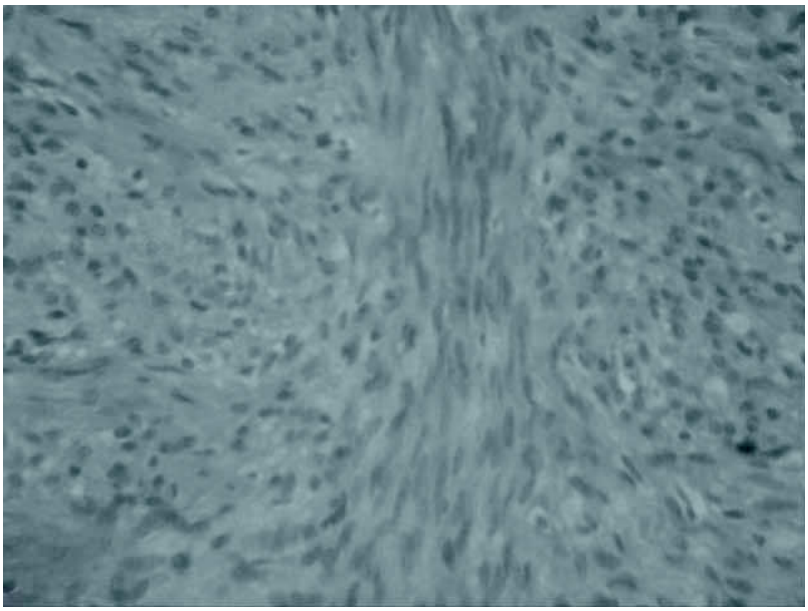

Fig.2. Histopathology showing interlacing fascicles of spindle cells with abundant cytoplasm and oval nuclei with blunt ends.

in the subcutaneous tissues of the breast. Diaz-Arias *et al*[4] proposed five sources: teratoid origin with extreme overgrowth of the myomatous elements, embryologically displaced smooth muscle from the nipple, angiomatous smooth muscle, a multipotent mesenchymal cell, and myoepithelial cells. The frequent occurrence of these tumors near the nipple may be related to the abundance of smooth-muscle cells around the nipple and areola, but the histogenesis of these lesions remains controversial.[1]

Only a few reports have described the radiological features of breast leiomyoma. Some of them note sonographic findings of a well-circumscribed solid mass similar to a fibroadenoma. The only distinction from fibroadenoma noted in these cases has been a lack of distal attenuation on sonography.[1,4,5] In our case, we didn't perform ultrasonographic examination. Histological examination of the surgical specimen identified the mass as a leiomyoma. The common histopathological features of leiomyomas of the breast are identical to those observed in leiomyomas at other sites: groups of interlacing bundles of spindle-shaped cells with blunt-ended nuclei and eosinophilic cytoplasm.[2] On immunoperoxidase staining, most leiomyomas are positive for vimentin, desmin, and muscle-specific actin.[3] In this case, all the histopathological findings indicated that the mass was a leiomyoma.

Most breast leiomyomas are diagnosed in women of late middle age, and they usually occur in the right breast.[3] Our patient was also in this category. The histopathological differential diagnoses for leiomyoma of the breast include adenoleiomyoma, cystosarcoma phyllodes, fibroadenoma with prominent smooth muscle, fibromatosis, benign spindle cell tumor of the breast, fibrous histiocytoma, myoepithelioma, myoid hamartoma and leiomyosarcoma.

Tamoxifen therapy has been shown to result in sudden and rapid growth of uterine leiomyomas, a change that may necessitate hysterectomy. One study indicated that this drug promotes formation of parenchymal leiomyomas of the breast and causes these masses to enlarge.[1] Antiobesity agents such as sibutramine and orlistat may promote the formation of breast leiomyomas.[6]

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