

Leiomyoma of the breast: A Case report

Memede leiomiyom: Olgu sunumu

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ABSTRACT

Leiomyomas are benign smooth muscle neoplasms that are common in the genitourinary and gastrointestinal tracts. They can occur anywhere in the body but are rare in the breast. Here we report a case of leiomyoma in the breast in a 43 years old woman with histological, immüno-histochemical characteristics and review the literature.

Key words: Leiomyoma, breast, diagnosis

ÖZET

Leiomiyomlar düz kas selim tümörlerinden olup sıklıkla genitoüriner sistem ve gastrointestinal sistemde bulunur. Vücutta herhangi başka bir yerde de bulunabilir ancak memede görülmesi nadirdir. Bu yazıda 43 yaşındaki kadında memede oluşan leiomiyom vakası histolojik ve immunokimyasal özellikleri ile birlikte literatür eşliğinde sunuldu.

Anahtar kelimeler: Leiomiyom, meme, tanı

INTRODUCTION

Leiomyoma most commonly occurs in the uterus, small bowel, esophagus and is a rare benign non epithelial tumor of the breast.¹ They have been reported in both men and women.² Its histopathology shows interlacing fascicles of spindle cells that have no atypia or mitoses.³

CASE REPORT

A 43 years old woman complaining from a right breast lump was seen at the general surgery clinic of Sivas Anadolu Hospital. She had no family history of breast cancer and there were no skin changes or axillary lymphadenopathy. Physical examination revealed a well-defined with 5 cm in diameter mass in the lower inner quadrant of the right breast. Ultrasonographic (USG) examination confirmed the presence of 5x5x3 cm, oval, well-circumscribed,

hypoechoic mass in the lower inner quadrant at the retroareolar region of the right breast.

There was no intramammary lymph node or axillary lymphadenopathy. And then the lesion was surgically excised.

Macroscopic examination of the lesion showed well-circumscribed, homogeneous, firm, whitish 5x5x3 cm mass. In histopathological (microscopic) examination the lesion was composed of fascicles of spindle cells that have no atypia. Necrosis and mitotic activity wasn't seen. These spindle cells had ovoid nuclei, delicate chromatin and small inconspicuous nucleoli with eosinophilic cytoplasm. These cells were immunohistochemically diffuse strong positive with smooth-muscle actin (SMA) and were stained as red histochemically with Masson-Trichrome stain. On the basis of these findings we diagnosed this case as leiomyoma of the breast (Figure 1, 2).

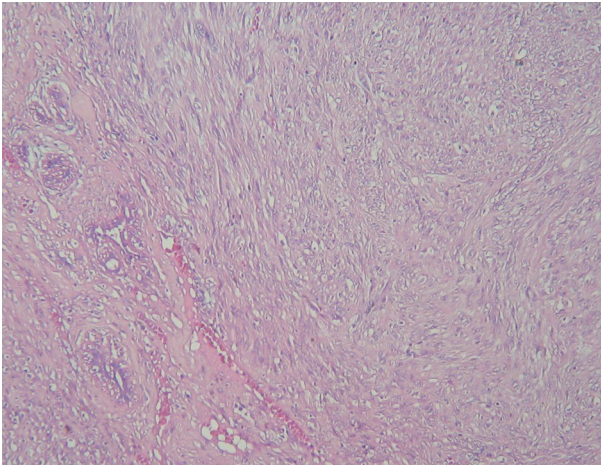


Figure 1. Interlacing bundles of spindle shaped smooth muscle cells with eosinophilic cytoplasm of the leiomyoma nodule at the right side of the figure (HE X50)

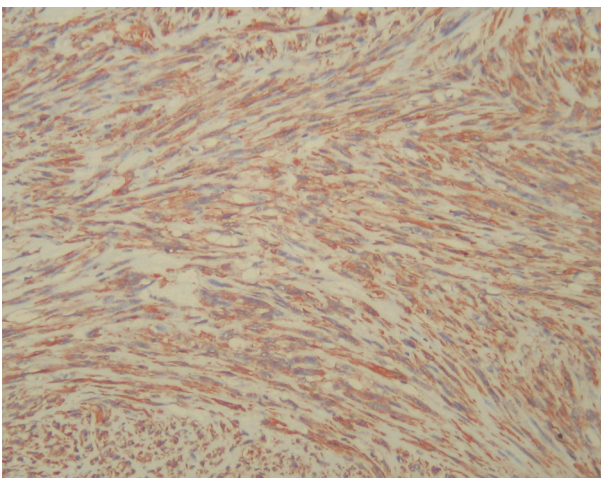


Figure 2. Immunohistochemically diffuse SMA (smooth muscle actin) positivity of the spindle shaped cells in the leiomyoma of the breast (IHC, SMA X100)

DISCUSSION

Leiomyomas are extremely rare breast tumors.⁴ First description of this tumor was made in 1913.⁵ Most of them occur in subareolar location.⁴ We know that these benign pure smooth muscle tumors of the breast generally occur in middle-aged women from the cases previously described. The duration of the lesions ranges from 1 month to 26 years and they involve the right breast more frequently as in our case.⁶ They also frequently occur near the nipple and this may be related to the abundance of

smooth muscle cells around the nipple and areola.⁷ To explain the origin of these tumors various theories have been proposed. Kaufman et al. suggested that these neoplasms arise from smooth-muscle cells that surround capillaries in the subcutaneous tissues of the breast.⁸ In the other hand Diaz-Arias et al. suggested that the origin of these tumors may include the following; (a) a teratoid origin with extreme overgrowth of the myomatous elements, (b) embryologically displaced smooth muscle from the nipple, (c) angiomatous smooth muscle, (d) multipotent mesenchymal cell, (e) myoepithelial cells.⁵

The histopathologic features of breast leiomyoma are the same as the leiomyomas of the other sites. Microscopic examination shows groups of interlacing bundles of spindle shaped cells with eosinophilic cytoplasm.⁸ Most of them are immunohistochemically positive for vimentin, desmin and α -smooth muscle actin.⁵

Fibroadenoma, myoepithelioma, phyllodes tumor and leiomyosarcoma are in the differential diagnosis of the breast leiomyoma.³ Leiomyosarcoma is the most important differential diagnosis of this tumor. Histopathologically leiomyosarcomas show cytologic atypia, 2-16 mitotic figures per 10 high-power fields with atypical mitoses, vascular invasion and necrosis.⁹ Recommended treatment of these lesions is complete excision.⁷

One study indicated that tamoxifen promotes formation of parenchymal leiomyomas of the breast.⁷ Also antiobesity drugs such as sibutramine and orlistat may promote the formation of these tumors.⁴

In conclusion, leiomyoma of the breast parenchyma is a rare benign neoplasm that is similar to especially fibroadenoma on ultrasonographic examination. Histopathological examination and immunohistochemical stains help to distinguish leiomyoma from other benign and malignant breast lesions.

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