

Case Report

Fibromatosis of breast in a young lady: An uncommon benign breast lesionKuladeepa Ananda Vaidya¹, Amar DN², Jasvanth CT³, Sukesh⁴¹Associate professor, Department of pathology, Srinivas Institute of medical science and research centre, Mukka, Mangalore.575021²Associate professor, Department of General Surgery, Srinivas Institute of medical science and research centre, Mukka, Mangalore.575021³Assistant professor, Department of General Surgery, Srinivas Institute of medical science and research centre, Mukka, Mangalore.575021⁴Professor and HOD, Department of pathology, Srinivas Institute of medical science and research centre, Mukka, Mangalore.575021***Corresponding author**

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Abstract: Fibromatosis is a rare entity and is even more unusual when found in the breast. Fibromatosis arising from the breast also referred to as desmoid tumor or aggressive fibromatosis of breast is a rare benign lesion posing clinical and radiological dilemma with various differential diagnosis, but histological examination can aid in confirming the diagnosis. This is a mesenchymal tumor with intermediate biological behaviour between the benign fibroblastic lesions and the low grade fibrosarcoma, characterized histologically by spindle cell proliferations composed of interlacing fibroblastic bundles and fascicles with varying degrees of collagen. We present this case of mammary fibromatosis in a 17-year-old girl who presented with a palpable mass within the medial portion of her left breast.

Keywords: fibromatosis, desmoid tumor, benign tumour, breast.

INTRODUCTION:

Mammary fibromatosis is a rare lesion constituting less than 0.2% of all breast tumours [1]. It is a type of extra abdominal desmoid tumour and is a benign stromal lesion of the breast. Mammary fibromatosis histologically demonstrates fibroblastic and myofibroblastic type of proliferation, with an infiltrative growth pattern with no metastasising potential [2, 3].

CASE REPORT:

A 17-year-old girl presented to surgery OPD with a three months history of left breast lump associated with mild local discomfort. On clinical examination, an ill-defined mass was palpated in upper inner quadrant, which was firm in consistency with restricted mobility. No other breast mass was detected. Ultrasound examination of the breast showed an ill-defined irregular hypoechoic lesion in the left breast in 11 o'clock position with a speculated border and mild increased internal vascularity. Fine needle aspiration cytology (FNAC) was performed; Smears showed fair number of scattered ovoid to spindle shaped bland cells. The cells were oval to spindle in shape with elongated nuclei having blunt or pointed ends, no hyperchromasia or abnormal mitosis seen. Cytological impression of benign spindle cell lesion was given. Based on these

radiological and cytological findings final clinical impression of stromal tumor of breast was rendered. Lumpectomy was done under general anaesthesia and the specimen was sent for histopathological examination.

Grossly the specimen was nodular, attached to fat, weighing around 10gms, measuring 4x3x3cm in size. External surface was covered by yellowish fat, Cut surface was showing well circumscribe, unencapsulated greyish white, firm lesion with trabeculated, whorled appearance, having poorly defined margins surrounded by fat [FIG 1, 2]. Microscopic Sections showed Cellular proliferation of bland spindled cells arranged into ill-defined long fascicles set in a collagenous stroma, entrapping few ducts and acini, and compressing normal breast lobules to one side. Cells are, slender, spindle shaped, uniform appearance, having pale staining elongated nuclei, lacking hyperchromasia or atypia [FIG 3, 4]. A diagnosis of mammary fibromatosis was made. The patient was followed up clinically for 3 months. There was no evidence of a breast mass or recurrence.

DISCUSSION:

Although this tumor is relatively benign, it is locally aggressive and has a tendency to recur without metastatic potential [4]. Breast fibromatosis frequently

shows typical mammographic and sonographic features that may be indistinguishable from those of breast cancer [5, 6]. Most of the cases are sporadic but 10-20% cases are associated with Familial Adenomatous Polyposis and 30% have prior history of trauma [7].

Clinically, these tumours of the breast are mobile and firm in consistency. Skin retraction or dimpling may be present in some cases. Lesions close to the nipple may present with nipple retraction, but skin or nipple changes were not present in our case. On mammography, these lesions are often irregularly shaped, high-density masses with speculated margins and may mimic breast cancer [1].

Microscopically these lesions have irregular margins, with spindle cells infiltrating the parenchyma and surrounding normal parenchymal elements. The entrapped ductal and lobular units may show mild

cellular atypia; however, the spindle cells are usually uniform with a low mitotic index. In our case lesion was seen extending in to surrounding fat and entrapping few ducts and few normal appearing lobular units were seen at the periphery, there was no atypia or mitosis. The pathognomic appearance of fibromatosis has been described as bland-looking spindle cells forming interlacing bundles with positivity of immunohistochemical markers for vimentin and smooth muscle actin supporting the diagnosis [8-11]. Immunohistochemistry was not performed in our case.

Some of the differential diagnoses for a bland spindle cell lesion include fibromatosis, dermatofibrosarcoma protuberance and fibromatosis-like metaplastic carcinoma [12]. Despite its high local recurrence rates ranging from 24% to 77% over the period of 10 years, management of desmoid tumors includes wide local surgical excision [13].



Fig 1, 2: Gross features: nodular structure covered by yellowish fat. Cut surface showing well circumscribe, unencapsulated greyish white lesion with trabeculated, appearance.

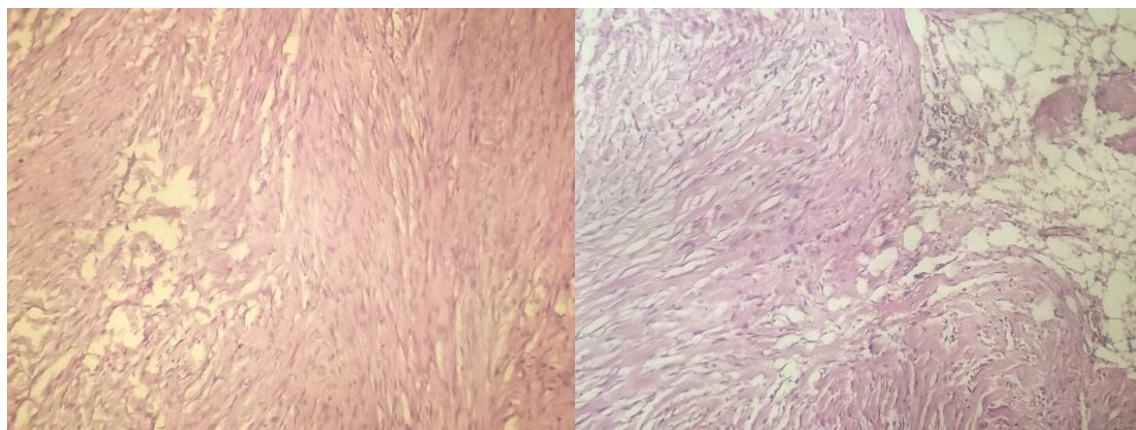


Fig 3, 4: Microscopy (H&E stain): showing benign spindle-shaped cells, arranged into ill-defined long fascicles set in a collagenous stroma without atypia, border extending into surrounding adipose tissue.

CONCLUSION:

Mammary fibromatosis is a rare benign tumor of breast. Awareness of this entity is important, since the clinical and radiological features of this lesion are indistinguishable from malignancy, the final diagnosis may be made with the aid of histopathological examination.

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