



Pedunculated Leiomyoma of Breast: A Common Lesion at An Uncommon Location.

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Received 19 August, 2015; Accepted 30 August, 2015 © The author(s) 2015. Published with open access at www.questjournals.org

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. There are few cases being reported in the literature. Here we report a case of 40 years old lady who presented to us with a painless pedunculated lesion of left breast near areola region. 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 pedunculated leiomyoma of breast).

Keywords: BREAST, BENIGN, LEIOMYOMA, NEOPLASM, SMOOTH MUSCLE.

I. INTRODUCTION

Leiomyoma of the breast is one of the rarest benign neoplastic epithelial tumors.⁽¹⁾ Most leiomyomas in the breast are found in the subareolar region.⁽²⁾ Hence we are presenting an unusual and rare case of pedunculated leiomyoma.

II. CASE REPORT

A 40 year old lady presented with left breast lesion to surgery OPD. The lesion appeared 15 yrs ago and grew slowly with no pain or fever. There was no history of nipple discharge, trauma or use of oral contraceptive pills. Physical examination revealed a well defined pedunculated swelling over left breast, nipple area measuring 2*2 cm, soft to firm, nontender.No lymph nodes palpable.

FNAC: Pauci cellular smear with spindle cells arranged in papillary pattern ,few in singles.These cells have scant to mild eosinophilic cytoplasm with round to oval nuclei with inconspicuous nucleoli. Diagnosis of **benign papillary lesion** given.

Excision biopsy of the lesion was sent to department of pathology.

III. MATERIALS AND METHODS

Tissue for light microscopy was fixed in 10 %buffered formalin, routinely processed, and embedded in paraffin. Sections were stained with Hematoxylin-eosin, Masson's trichrome , and Von geison stain.

IV. HISTOPATHOLOGY

Gross: (Fig-1,2) Specimen consist of single piece of globular skin covered tissue measuring 2.5 cm in diameter. Cut surface shows well circumscribed, grey white whorled areas.

Microscopy: (Fig-3,4,5) Section studied shows stratified squamous epithelium ,sub epithelium tissue consists of fibrocollagenous tissue with adnexa.A well circumscribed area shows interlacing bundles of smooth muscles having abundant bipolar eosinophilic cytoplasm and round to oval nuclei with blunt ends.

Features are consistent with leiomyoma.

Special stains:-(Fig-6) **Masson trichrome stain** - revealed that interweaving bundles of fibres separated by moderate amount of connective tissue with only longitudinal arranged striations muscle tissue stained **red**.

Von geison stain: (Fig-7) tumor cells stained yellow colour.

On the basis of these histopathology and histochemical findings. It was diagnosed as **pedunculated leiomyoma** of the breast.

V. DISCUSSION

Leiomyomas of the breast are extremely rare. Strong, in 1913, is credited with the early description of leiomyoma of the mammary gland.⁽³⁾ 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 and Hirsch^[2] suggested that they arise from the smooth-muscle cells that surround capillaries in the subcutaneous tissues of the breast. 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.

Most breast leiomyomas are diagnosed in Women of late middle age and they usually occur in the right breast^[3]. Present case patient is 40 years old and the lesion developed in her left breast as pedunculated lesion of long duration.

Table 1. Review literature in 22 reported cases of leiomyoma of the breast..⁽⁸⁾

Ref. #	Age (Yr)	Duration (Mo)	Location	Size (cm)	Symptoms	Treatment
1	48	NR	LUI	1.0	None	Excision
2	46	48	RUO	6.0	Discomfort	NR
3	34	1	RUO	3.0	Discomfort	Excision
4	45	180	RL	3.0	Pain X 2 months	Simple Mastectomy
5	58	204	C	13.8	Discomfort	Simple Mastectomy
6	54	312	RUI	4.0	Discomfort	Radical Mastectomy
7	40	120	LLO	10	Pain X 3 months	Excision
8	50	1	RUC	0.5	Tenderness	Excision
9	52	0.5	C	2.5	None	Excision
10	69	1.5	RUO	2.0	None	Excision
11	43	0	LU	0.5	None	Excision
12	42	24	RUO	4.5	None	Excision
13	42	NR	RUI	0.7	None	Excision
14	42	NR	LUI	3.5	None	Excision
15	53	12	LUI	10	Rapidly enlarging mass	Excision
16	50	36	RUO	1.0	Pain	Excision
17	54	0	RUI	5.5	None	Excision
18	48	24	LUO	4.0	None	Excision
19	45	24	LUI	1.6	Tenderness	Excision
20	47	24	LI	2.7	Rapidly enlarging mass	Excision
21	47	1	RUI	1.5	Skin indentation	Excision
22	39	NR	Deep	4.0	NR	Excision
Present Case	40	180	C (pedunculated)	2	none	Excision

RUO, right upper outer, RL, right lower, C, central, RUI, right upper inner, LLO, Left lower outer, RUC, right upper central, LU, left upper, LUI, left upper inner, LUO, left upper outer, LI, left inner, NR, not reported.

The histopathological differential diagnoses for leiomyoma of the breast include adenoleiomyoma, cyst sarcoma phyllodes, fibro adenoma with prominent smooth muscle, fibromatosis, benign spindle cell tumor of the breast, fibrous histiocytoma, myoepithelioma, myoid hamartoma and leiomyosarcoma.⁽⁴⁾

The first three lesions can be ruled out by thorough sectioning because they contain epithelial/ductal structures. Fibromatosis, benign spindle cell tumor of the breast, fibrous histiocytomas, and myoepitheliomas are lesions composed of varying mixtures of fibroblasts, my fibroblasts, undifferentiated mesenchymal cells, and my epithelial cells rather than purely smooth muscle cells. Myoid hamartoma of the breast, likened by some to leiomyoma of the breast, incorporates as part of the tumor fibrous tissue and mature adipose tissue in addition to smooth muscle. Perhaps the most important differential diagnosis is with leiomyosarcoma of the breast

Histological, leiomyosarcomas feature prominent cytologic atypia, with 2–16 mitotic figures per 10 high-power fields, atypical mitoses, vascular invasion, and necrosis.⁽⁶⁾ It is particularly important to differentiate these two neoplasms because of the risk of local recurrence or distant spread with leiomyosarcoma.

VI. CONCLUSION

Leiomyoma of the breast parenchyma is a rare benign neoplasm that appears similar to fibro adenoma on sonography and mammography. The findings usually suggest a benign breast tumor .Only Histopathology examination helps to distinguish leiomyoma from malignant lesions.

Fig:1- Examination of the surgical specimen revealed well-circumscribed globular mass measuring 2.5 cm in diameter covered with skin.



Fig:2:- The cut surface showed grey-white whorled in appearance.



FIG: 3: (Hematoxylin and eosin 4x) showed epidermis and a circumscribed area
Showed pattern of interlacing fascicles of smooth-muscle cells.

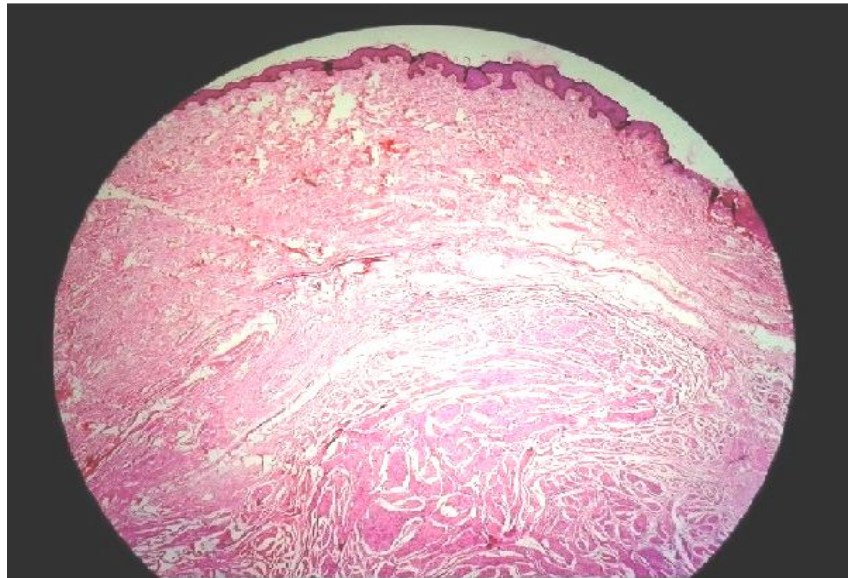
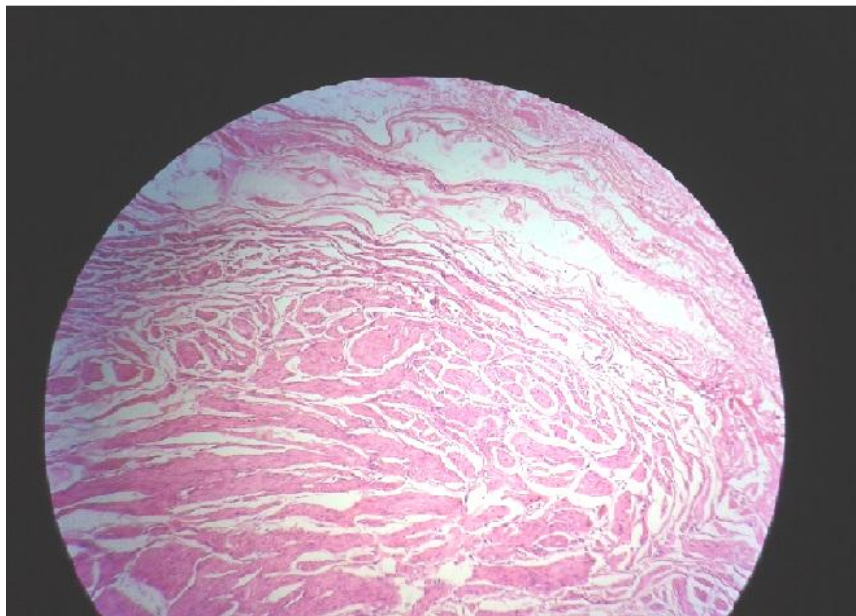
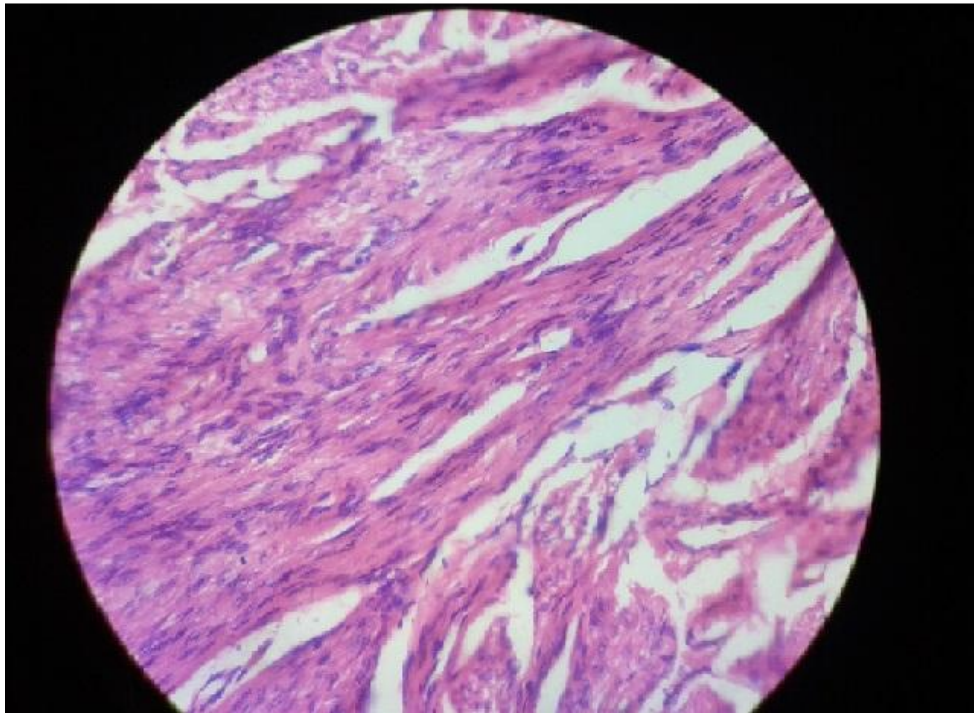


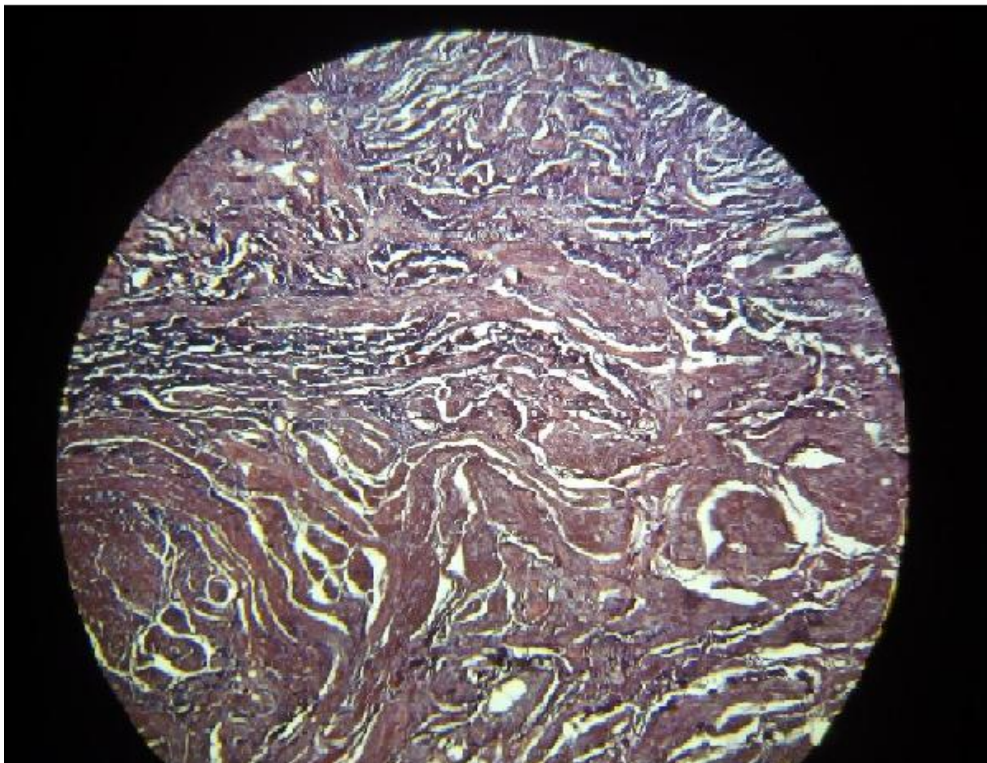
Fig 4:(Hematoxylin and eosin 10x) showing interlacing fascicles of spindle cells with Abundant cytoplasm and oval nuclei with blunt ends.



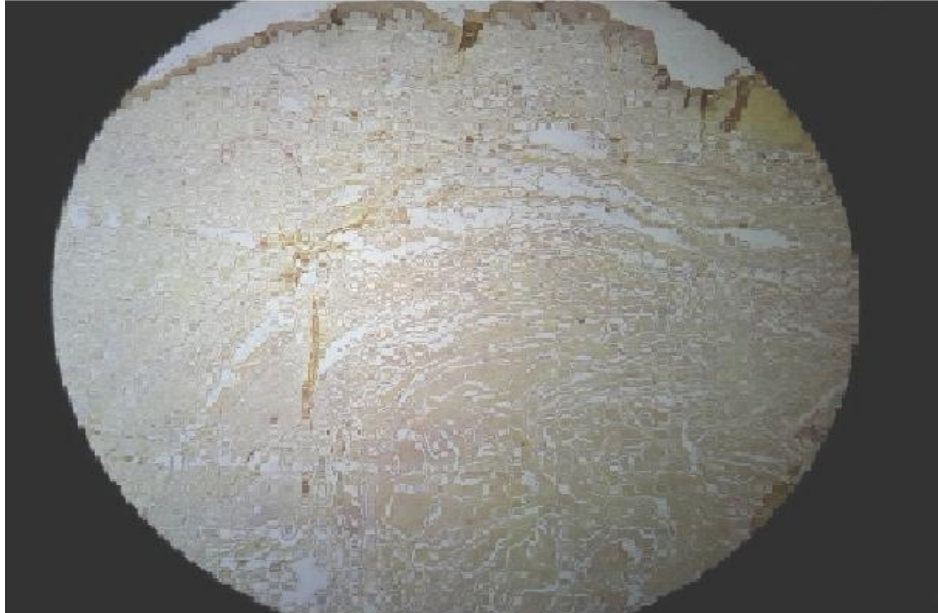
Fig,5:(Hematoxylin and eosin 40x) showing interlacing fascicles of spindle cells with abundant Bipolar eosinophilic cytoplasm and oval nuclei with blunt ends.



(Fig-6): MTS positive - revealed that interweaving bundles of fibres separated by moderate amount of connective tissue with only longitudinal arranged striations muscle tissue stained red.



(Fig-7): Von geison stain –yellow colour of tumor tissue.



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