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Case Report

Giant solitary fibrous tumour breast: a case report

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ABSTRACT

Although giant solitary fibrous tumor is a rare soft tissue tumor but is to be considered in the differential diagnosis of benign breast tumors like fibroadenoma and phyllodes tumor at the time of clinical evaluation.

Keywords: Breast, Benign breast tumors, Solitary fibrous tumor

INTRODUCTION

The commonest benign tumor of breast in all age groups of women is fibroadenoma. Benign phyllodes tumor is considered when the tumor is occurring in elderly women. Yet a benign soft tissue tumor of rarest occurrence known as solitary fibrous tumor should be considered in evaluating a nodular mass in the breast as it clinically appears as fibroadenoma.[1-9]

Solitary fibrous tumor is an uncommon mesenchymal benign neoplasm is often seen in pleura, visceral organs and bone but is very rare in breast and only 27 cases have been reported till the review by Jungjung et al.[1]

Solitary fibrous tumor although common in pleura occurs in tissues like kidney, urinary bladder, spinal cord, scrotum, palate prostate, perineum, trachea and bone with a wide range of histological pattern.[1,2] Solitary fibrous tumor was first described by Klemperer et al in pleural mass but it was first identified in the breast by Haagensont.[3,4]

It is usually seen in females between 38 to 88 years with the size of tumor rangeing from 0.6 cm to 15 cm.[1,2]

Although tumor presents as slow growing painless, firm nodule but the presenting symptoms will depend on the anatomical location.

Diagnosis depends on imaging features and FNAC but confirmatory diagnosis is possible only on histology.[1,2]

CASE REPORT

A young female of 30 years, presented with a complaint of slow, persistent, painless enlargement of right breast for last 5 years. No nipple discharge, no fever and no local injury to the breast. There were no complaints of any other co-morbidity like diabetes, hypertension, cardiac or pulmonary diseases. Her menstrual cycles were normal and regular, no gynecologic complaints. She had 3 normal deliveries and last breast fed child was 8 years old.

General systemic examination revealed no abnormality.

Local examination showed right breast was hugely enlarged with normal nipple, areola and skin (Figure 1a). There was slight venous engorgement in lower quadrant of breast and no nipple discharge.

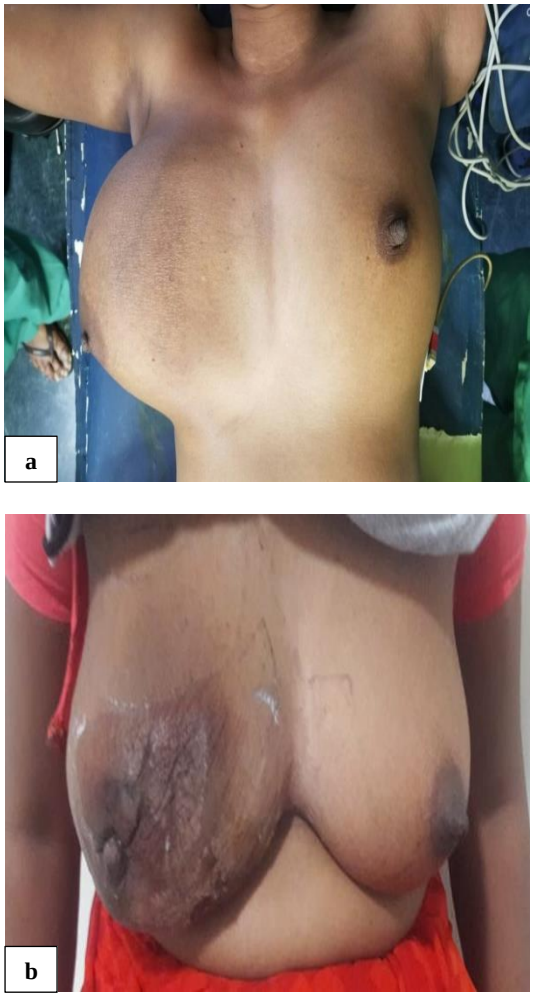

Figure 1: (a) Right breast tumor before surgery; (b) right breast after surgery.

There were multiple firm, non-tender nodules of different sizes, palpable in all the quadrants of the right breast. The mass, with the nodules within it was mobile. Left side breast was normal. No axillary palpable lymph nodes were detected.

A provisional diagnosis of multiple fibroadenomas of right breast was considered with other possibility of cysto-sarcoma phyllodes was considered due to its huge size.

Routine hematological, bio-chemical and serological investgations, X-ray chest and ECG were within normal limits.

Ultrasound examination showed a diffuse large solid inhomogeneous mass involving all the quadrants right breast without any internal vascularity The possibility of cystosarcoma phyllodes. Lesion was considered. The left breast was normal and bilateral tiny axillary lymph nodes were detected. FNAC was done from many nodules of right breast mass. Smears showed thin cellularity with pink fibres and scanty cohesive ductal cell clusters in branching fashion. Occasional stromal cells showed mild pleomorphic nuclei.

Although cytologic diagnosis of fibroadenoma was considered, but in view of scanty cells in FNAC of huge mass a biopsy was advised.

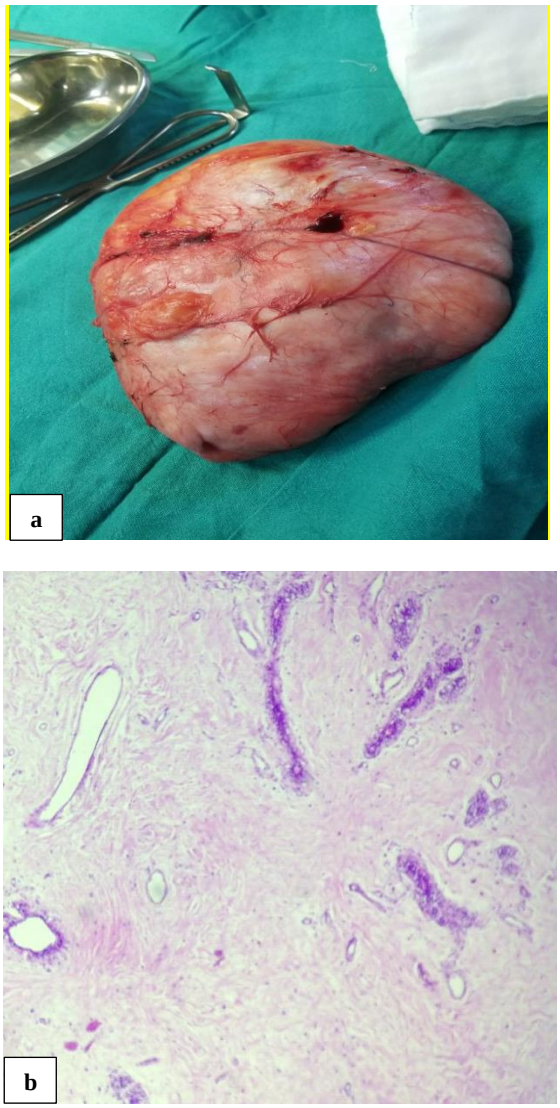

Figure 2: (a) Gross appearance showing lumpectomy specimen; (b) photomicrograph showing fibroadenoma area H and E×100.

Descrepant opinion of radiologic and cytologic tests prompted us to perform lumpectomy of right breast mass.

Under general anesthesia with a transverse curved sub areolar incision of breast lumpectomy was explored. The mass showed a thick walled fibrous sac containing many nodules of different sizes and was occupying all the quadrants of right breast. The fibrous sac was dissected from all sides and lump excised easily sparing nipple, areola and small amount of breast tissue in upper and lower flaps, after securing perfect hemostasis, suction drain was kept and incision closed in layers. Post-

operative period was uneventful with perfectly healed surgical wound (Figure 1b).

Grossly the excised mass was globular, smooth, encapsulated, gray to pearly white weighing about 1200 grams and measured 18×15×7 cm (Figure 2a). Cut surface was gray to pearly white with focal gelatenous appearance with foci of firm nodular areas.

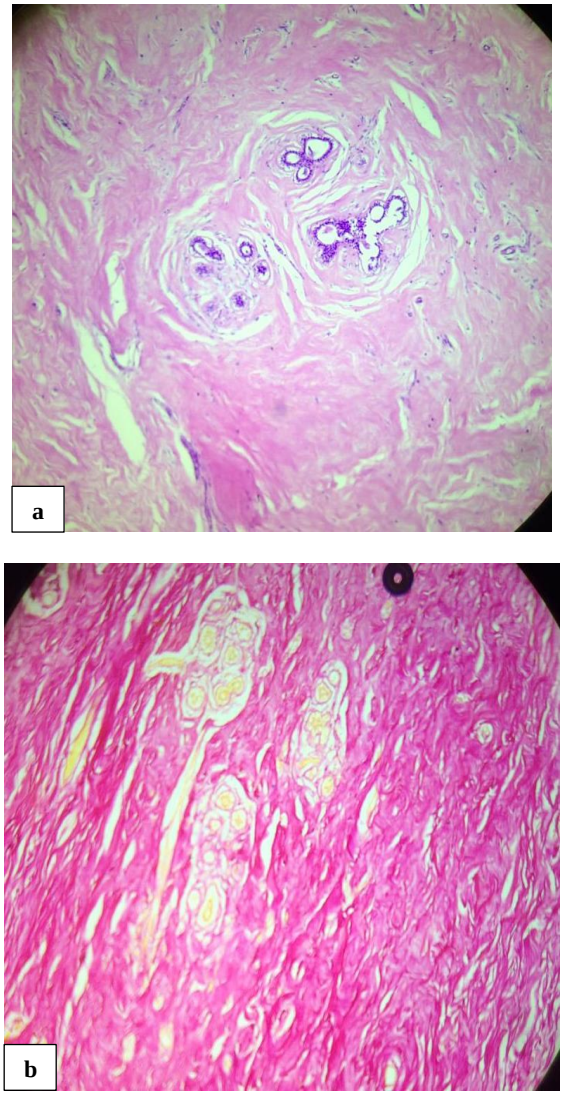

Figure 3: (a) Photomicrograph showing lobular unit breast with peri and intralobular fibrous tumor H and E×100; (b) photomicrograph showing pink coloured solitary fibrous tumor revealed by Vangeisson stain×100.

Microscopic examination of multiple areas of the mass showed large diffuse areas of intra and interlobular fibrosis containing collagen with occasional fibroblasts displacing the ducts (Figure 3a). There were foci of intra lobular loose areolar stroma and stromal hyperplasia compressing ducts (areas of fibroadenoma) (Figure 2b). The stromal cells occasionally have mild pleomorphic spindle nuclei. No mitosis or no malignant changes either in the epitheliual cells or in the stromal cells were noted.

As the special stains (Vangeisson and Masson Trichrome) revealed the massive acellular stroma as collagen (Figure 3b) a diagnosis of solitary fibrous tumor breast associated with small areas of fibroadenoma was considered.

DISCUSSION

Solitary fibrous tumor is an uncommon soft tissue tumor occurring commonly in pleura but rarely in breast.[1-9]

Klemperer and Robin first described the lesion in 19311 as a pleural based mass. Bone, orbit, kidney, urinary bladder, spinal cord, palate, scrotum, prostate, perineum and trachea are other sites of occurrence.[1-3] The lesion was called by different names as solitary fibrous tumor, myofibroblastoma, mammary type myofibroblastoma and mastopathy.[1-7] While some authors considered solitary fibrous tumor and myofibroblastoma were similar lesions others tried to distinguish between the two lesions with subtle differences.[7,8] Although Milkowitz et al description of fibrous mastopathy was similar to solitary fibrous tumor in breast but Haagenson first used the term, solitary fibrous tumor in breast lesion.[3,6]

Solitary fibrous tumor usually occured between 38 to 88 years of age, while our case was still younger than reported earlier.[1] Also worth notable was that the size and weight of the present case were of much higher dimensions than those mentioned in the literature.[1] Hence the word giant solitary fibrous tumor was justified for the lesion.

The clinical presentation was usually a painless slowly growing mass in the breast. Presurgical diagnosis was possible with imaging features and needle aspiration cytology, but in our case both methods gave conflicting results and solitary fibrous tumor was never considered, possibly because of our inexperience with this tumor. Resected mass was usually well circumscribed and encapsulated, as was in our case although it was huge mass. The tumor occured as an isolated lesion in an organ revealing that our case was an exception of solitary fibrous tumor coexisting with fibroadenoma in a single mass and same breast.[1-9] Yuochikinoshita et al had identified fibroadenoma in breast and solitary fibrous tumor in axillary skin.[4]

Haagenson felt this tumor as a clinicopathological entity and was to be differentiated from fibrocystic disease.[3]

Minkowitz et al named this condition as mastopathy and stated the disease occurring in three progressive types.[6]

Type 1 comprised of mature acini with scanty collagenized stroma in a concentric pattern; type 2 was characterized by decreased acinar tissue with coarse collagen bundles dissecting the epithelial elements; type 3 was characterized by almost complete disappearance of

the epithelial elements with a few remnant ductules surrounded by densely collagenized stroma.

Although our case was close to type 2 lesion of Minkowitz et al but presence of loose areolar stroma around ducts and obliteration of the ducts with focal epithelial hyperplasia as seen in our case reminded us of classic feature of fibroadenoma in a solitary fibrous tumor.[6] Pathogenesis of dual tumors in our case can be explained that solitary fibrous tumor has erupted in a pre-existing fibroadenoma breast. Extensive fibrosis although brought in other lesions like diaiabetic mastopathy, fibromatosis, hamartomas, fibrocystic change and pseudo angiomatous stromal hyperplasiato be distinguished from solitary fibrous tumor, the specific histologic features in all the above lesions makes it possible to identify them.

Fibrocystic disease although showed inter lobular fibrosis similar to solitary fibrous tumor but ducts show cystic change with epithelial apocrine change. Fibromatosis usually revealed antecedent trauma and histologically more cellular tumor with young fibroblasts than dense collagen as seen in our case. Hamartomas usually showed fibrovascular proliferations rather than pure collagen as in our case. Although the exact etiopathogenesis was unknown the possibility of hormonal influence was suspected.

Because solitary fibrous tumor of breast was a distinctive, nonrecurrent and underrecognized lesion, cases were to be documented to understand more about etiopathogenesis outcome of this curable disease.

CONCLUSION

Most common benign breast tumors are fibroadenoma, cystosarcoma and fibrocystic disease. The solitary fibrous tumor of the breast is rarest distinctive, nonrecurrent, under recognized benign soft tissue lesion, which is to be kept as a differential diagnosis for a benign single breast tumor even in young women.

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REFERENCES

1. Jung MJ, Alrahwan D, Dubrovsky E, Baek D, Ayala AG, Jae YR. Solitary fibrous tumor of breast with anaplastic areas (malignant solitary fibrous tumor), a case report with review of literature. J Breast Cancer. 2019;22(2):326-35.
2. Pathology Outlines. Fact sheet: Solitary fibrous tumor. Available at: https://www.pathologyoutlines.com/topic/softtissuesft.html?mobile=off. Accessed on 26 June 2021.
3. Haagensen CD. Fibrous disease of the breast. Diseases of the breast. 3rd ed. Philadelphia: WB Saunders; 1986: 125-35.
4. Kinoshita Y, Takasu K, Hosaka N, Omura N, Yuri T, Emoto Y, et al. Solitary extra pleural fibrous tumor of axillary skin diagnosed by fine needle aspiration cytology coincident with simultaneous breast fibroadenoma. World J Med Surg Case Rep. 2013;10(2):21.
5. Howitt BE, Fletcher CDM. Mammary type Myofibroblastoma clinicopathologic characterization in a series of 143 cases. Am J Surg Pathol. 2016;40(3):361-7.
6. Minkowitz S, Hedayati H, Hiller S, Gardner B. Fibrous mastopathy: a clinical histopathologic study. Cancer. 1973;32(4):913-6.
7. Salomao DR, Crotty TB, Nascimento AG. Myofibroblastoma and solitary fibrous tumor of the breast histopathologic and immunohistochemical studies. Breast. 2001;10(1):49-54.
8. Damiami S, Miettinen M, Peterse JL, Eusebi V. Solitary fibrous tumor (myofibroblastoma) of the breast. Virchows Arch. 1994;425(1):89-92.
9. Ranjani CP, Prasad KRK, Gokhale CAGK, Reddy S, Ganesh O. Solitary fibrous tumor an experience. Antisepetic. 2001;98(6):230-1.

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