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Management of benign breast diseases at a tertiary care hospital

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Abstract

Fibroadenoma is the most common lesion of the breast; it occurs in 25% of asymptomatic women. They are benign, spherical, well-demarcated tumors of varying size. They arise from the epithelium and stroma of the terminal duct-lobular unit. It is usually a disease of early reproductive life; the peak incidence is between the ages of 15 and 35 years. About 50 cases of benign breast diseases were selected, only inpatient cases are considered for the study. Outpatient cases, males, malignant cases and cases which were operated early were excluded from the study. Majority of our cases were managed surgically (90%). Only 5 out of 50 i.e. 10% cases were managed conservatively. All the 5 cases which were managed conservatively are Fibroadenosis. Conservative line of management included.

Keywords: Fibroadenoma, fibroadenosis, management

Introduction

Many pathologists label most of the benign epithelial lesions with variety of terminologies such as cystic disease, fibrocystic disease, cystic mastitis, cystic mastopathy, epithelial hyperplasia, mammary dysplasia, benign breast disease.

Many of the breast lesions are clinically suspected as malignant lesions but diagnosed as benign after Histopathological examination.

Fibroadenoma is the most common lesion of the breast; it occurs in 25% of asymptomatic women. They are benign, spherical, well-demarcated tumors of varying size. They arise from the epithelium and stroma of the terminal duct-lobular unit. It is usually a disease of early reproductive life; the peak incidence is between the ages of 15 and 35 years^[1].

Macroscopically, the lesion is a well-circumscribed, firm mass, <3cm in diameter, the cut surface appears lobulated and bulging. If the tumor assumes massive proportions (>5cm), it is called "giant fibroadenoma". Microscopically, fibroadenoma consists of a proliferation of epithelial and mesenchymal elements. The stroma proliferates around tubular glands (pericanalicular growth) or compressed cleft-like ducts (intracanalicular growth)^[2].

The lesion is a hormone-dependent neoplasm that lactates during pregnancy and involutes along with the rest of the breast in perimenopause. A direct association has been noted between oral contraceptive use before age 20 and the risk of fibroadenoma. The Epstein-Barr virus might play a causative role in the development of this tumor in immunosuppressed patients.

Juvenile fibroadenoma is a variant of fibroadenoma that presents between 10 and 18 years of age, usually as a painless, solitary, unilateral mass >5cm. It can reach up to 15 or 20cm in dimension, so although it is an entirely benign lesion^[3].

Phyllodes tumor is a fibroepithelial tumor of the breast with a spectrum of changes. Benign phyllodes tumor is usually difficult to differentiate from fibroadenoma. Hypercellular stroma with cytologic atypia, increased mitoses, and infiltrative margins of the lesion are the most reliable discriminators to separate lesions with recurrence and malignant behavior.

Mammography and ultrasonography are the mainstay of routine imaging of breast lumps. Wurdinger *et al* show that round or lobulated shape, well-defined margins, heterogeneous internal structure, and non-enhancing internal septation are more common findings in phyllodes tumors than in fibroadenomas.

As both phyllodes tumors and fibroadenomas belong to a spectrum of fibroepithelial lesions. Cytologically, it is often easier to differentiate benign from malignant phyllodes tumors than to separate benign phyllodes tumors from fibroadenomas. The presence of both epithelial and

stromal elements within the cytological smear supports the diagnosis. The presence of cohesive stromal cells (phyllodes fragments), isolated mesenchymal cells, and clusters of hyperplastic duct cells, foreign body giant cells, blood vessels crossing the stromal fragments, and bipolar naked nuclei and the absence of apocrine metaplasia are highly suggestive of a phyllodes tumor.

Conventional mammography delivers a radiation dose of 0.1 cGy per study. Screening mammography is used to detect unexpected breast cancer in asymptomatic women. With screening mammography, two views of the breast are obtained, the craniocaudal (CC) view and the mediolateral oblique (MLO) view [4].

The MLO view images the greatest volume of breast tissue, including the upper outer quadrant and the axillary tail of Spence. The CC view provides better visualization of the medial aspect of the breast and permits greater breast compression.

Methodology

About 50 cases of benign breast diseases were selected, only inpatient cases are considered for the study. Outpatient cases, males, malignant cases and cases which were operated early were excluded from the study.

Detailed history of all the fifty cases were taken according to the proforma approved by the guide. Information regarding age, religion, socio- economic status, nature of symptoms, duration, menstrual status, marital status, breast feeding were taken. History regarding to the usage of oral contraceptive pills, built and nourishment, habits were also noted. Family history regarding any breast conditions were obtained.

All the patients were examined systematically including breast examination and systematic examination and assessment of nutritional status. All underwent routine investigations which included blood counts-Hb %, BT, CT, Blood sugar levels (RBS), Blood urea, Serum creatinine, Urine routine and ECG. Investigations like USG and Mammography were done in some number of required cases.

The follow- up of the prospective cases were done at the hospital in OPDs. About 28 cases returned to the hospital for follow- up most of them being outpatients treated conservatively and some who were operated. The period of follow- up ranged from 3- 18 months with mean of 8 months depending upon the time of entry into the study. The follow up included recording of the patients symptoms. At the end of the study period and follow- up the material was analysed and results were tabulated.

Descriptive and inferential statistical analysis has been carried out in the present study. Significance is assessed at 5% level of significance.

Results

Out 11 patients, 3 patients showed radio lucent shadows of simple cyst and one patient with radio lucent shadow suggestive of Galactocele. 3 patients showed mixed density suggestive of benign phyllodes tumour and 2 patients had mixed density suggestive of suppurative lesions.

Table 1: Mammography

Mammography	No. of patients	%
NA	39	78
Radio lucent	4	8
Radio opaque	5	10
Total	11	22

34 out of 50 of our patients underwent USG examination of the

breast. 15 of these i.e. 30% had features of fibroadenoma, 6(12%) had features of Abscess, 7(14%) had features of benign breast disease and the remaining 5 had other features suggestive of galactocele, benign cyst, phyllodes, lipoma of the breast. One patient had bilateral fibroadenoma of the breast.

In 25 cases, FNAC reported as fibroadenoma and subsequently biopsied and confirmed to be fibroadenoma (100% accuracy).

In 9 cases of fibrocystic disease subjected to FNAC, all 9 cases were reported as fibrocystic disease. But only 4 cases underwent excision and got confirmed histopathologically.

3 cases of phyllodes on clinical examination, FNAC was done all the cases were positive for phyllodes and later were confirmed by histopathology reports.

3 cases of antibioma FNAC was done, all the cases were positive for antibioma.

One case of benign cyst which was suspicious of cancer being subjected to FNAC yielded keratinous cyst in FNAC.

One each case of lipoma and breast abscess detected by FNAC.

Table 2: Fine needle aspiration cytology

Fine needle aspiration cytology	No. of patients (n=50)	%
Nil	7	14.0
Yes	43	86.0
• Fibroadenoma	24	48.0
• Fibrocystic disease	9	18.0
• Antibioma	3	6.0
• Phyllodes	3	6.0
• B/L FA	1	2.0
• Breast abscess	1	2.0
• Keratinous cyst	1	2.0
• Lipoma	1	2.0

5(10%) breast abscess out of which one is bilateral abscess, 3(6%) were antibioma, 3(6%) were phyllodes, 1(2%) case each of lipoma, galactocele, duct ectasia, simple cyst.

3 cases of phyllodes, was difficult to differentiate clinically from fibroadenoma when subjected to FNAC yielded phyllodes.

Fibroadenoma is most common presentation accounting to 50%.

Second most common is fibrocystic disease accounting 18%. Out of these 9 cases 7 cases were identified under USG.

Table 3: Diagnosis

Diagnosis	No. of patients	%
Fibroadenoma	24	48.0
Fibrocystic disease	9	18.0
Breast abscess	5	10.0
Antibioma	3	6.0
Phyllodes	3	6.0
B/L Breast abscess	1	2.0
B/L FA	1	2.0
Galactocele	1	2.0
Lipoma	1	2.0
Duct ectasia	1	2.0
Sebaceous cyst	1	2.0
Total	50	100.0

Majority of our cases were managed surgically (90%). Only 5 out of 50 i.e. 10% cases were managed conservatively.

All the 5 cases which were managed conservatively are Fibroadenosis. Conservative line of management included:

Reassurance-patients were explained about the condition and have been advised to follow up regular intervals.

Breast support.

Analgesics-mainly NSAIDS were prescribed.

Cap. Evening prime rose oil 500 mg BD was prescribed.

In 3 cases it gave good result with the above regime. One case did not follow up. One case did not take the medicines as she was not affordable was advised to continue medicines adding anti spasmodic as she was having associated spasmodic dysmenorrhoea.

Remaining 45 cases were managed surgically. Out of which 36 were managed with excision and remaining 6 cases of breast abscess underwent incision and drainage.

Table 4: Management

Treatment	No. of patients	%
Excision	36	72.0
Conservative	5	10.0
I & D	6	12.0
Wide excision	3	6.0
Total	50	100.0

Table 5: Ultrasonography of the breast

USG	No. of patients (n=50)	%
Nil	16	32.0
Yes	34	68.0
• Fibroadenoma	15	30.0
• Abscess	6	12.0
• BBD	7	14.0
• B/L FA	1	2.0
• Benign cyst	1	2.0
• Galactocele	1	2.0
• Phyllodes	2	4.0
• Lipoma	1	2.0

Discussion

Comparing both the breasts, 48% of lumps in the right breast were located in upper outer quadrant, while 8% were in lower outer quadrant and 10% in more than one quadrant in our study.

In the left breast preponderance was seen in left upper outer quadrant 22% while 10% were more than one quadrant. Of both sides 13 of tumour occurred in left lateral quadrant, whereas in 29 cases it was seen on right lateral quadrant.

Oluwole *et al* [5] showed that 60% lumps occurred in lateral quadrant. While upper outer quadrant had 41% of lumps lower outer 19%.

In our study 84% of cases had a solitary lump. Among fibroadenoma cases 80% had unilateral solitary tumour.

Rangabhashyam *et al*. [6] showed that fibroadenomas were 71% solitary, 10% bilateral. But Shukla [7] showed that 10% were multiple and 8% bilateral.

Majority of the lumps were 2-5cm in size (64%), 36% were 5-10cm size in this 6 (24% of fibroadenomas) were giant fibroadenomas in our study.

Rangabhashyam *et al*. [6] showed that 6% fibroadenomas were giant ones in his study.

De Cholnovky [8] described various sizes (fibroadenosis) and maximum of them being 2cm in diameter (57%). In this study, 75% of the phyllodes tumours were more than 10cm in size, maximum being 15*13cm. Harris R.J. *et al*. showed the sizes from 3-5cm upto 40cm.

In our study none of the patients were anemic while only two were diagnosed as diabetic.

Sonography was done in 34(68%) cases and out of which 16(32%) were diagnosed as solid masses and given as fibroadenoma which were later proved on FNAC, 6 were diagnosed as breast abscess(12%), 7 were diagnosed as fibrocystic disease (14%) out of which one was diagnosed as

fibroadenoma with FNAC.

1 case of benign cyst was detected which was galactocele, and one was given as lipoma which was proven under FNAC as lipoma of breast.

Cysts are circumscribed masses, defined with central hypoechoogenicity according to Michell. M.

3 cases of phyllodes were identified and were proved by FNAC and one case of antibioma which was sonographically detected was proven under FNAC.

Since FNAC was diagnostic in majority of our cases and had palpable lumps in all patients the need for Mammography (22%) and ultrasonography (68%) were limited. Mammography was done in about 11 cases. Out of which 4 showed radiolucent i.e. simple cyst or galactocele, 5 showed radio opaque and 2 showed mixed density i.e. suppurative lesion.

FNAC was done for all the patients except a case each of galactocele and breast abscess cases to confirm the clinical diagnosis. 43 patients i.e. 86% out of which 50% were diagnosed as fibroadenoma.

18% of fibrocystic disease and 3 cases each of antibioma and phyllodes tumour were diagnosed.

100% of the fibroadenoma and 100% of the fibroadenosis were diagnosed cytologically.

Similar results were produced in a prospective study MVJ medical College and Research Hospital, Hoskote, Bangalore, were they showed sensitivity of clinical diagnosis as 91.1% and FNAC as 100% in all the patients with fibroadenoma and only 78% sensitivity in the diagnosis of fibroadenosis [9].

Somer G. Robert *et al*. [10] showed that fine needle aspiration cytology in 92% accurate for solid neoplasias. 100% specificity and 78% sensitivity was shown in our study.

Gupta *et al*. showed that cyto diagnosis is highly dependable for benign tumours. Shukla [7] confirms that phyllodes is confused with fibroadenoma clinically and cytologically.

Out of 50 cases, about 25(50%) were Fibroadenoma, 9 cases (18%) fibroadenosis, 6(12%) breast abscess, 3(6%) were antibioma, 3(6%) were phyllodes, 1(2%) case each of lipoma, galactocele, duct ectasia, simple cyst.

Similar results were produced in a prospective study in MVJ medical College and Research Hospital, Hoskote, Bangalore in 2009, were they recorded in a total number of 110 cases, fibroadenoma as the most common with 56.4%, with fibroadenosis as the second most common with 28.6%, and similar results were depicted with other benign lesions of the breast [9].

M Kumar *et al*. [11] in a cross sectional study of 380 cases showed fibroadenoma as the most common with 160(42.1%).

Irabor *et al*. [12] showed that fibroadenoma is most common benign breast lesion and the mean age of occurrence as 24.44 years.

Out of 9, 5 cases of fibroadenosis were managed conservatively, 3 cases did not follow up where as the other two cases improved with symptoms.

In our study 70% of the lumps were excised. 100% of fibroadenomas were excised by simple excision method. Wide excision was done in two cases of phyllodes with 1cm margin as per Haagenson's guidelines. Simple excision was carried out as to get wider margin of 2-3cm for the other phyllodes tumour.

Incision and drainage was done all the 5 cases of Breast abscess. Cone excision was done for a case of left sided duct ectasia.

Conclusion

- Majority of the treatment consisted of surgical excision followed by histopathological confirmation.
- Conservative management in our study consisted of

symptomatic treatment along with reassurance for those having cyclical mastalgia and lumpiness of breast, which was seen in fibrocystadenosis.

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