Original Research Paper

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Breast cancer, an apprehension among men- Are they the forgotten victims?

Pathology

KEYWORDS: Male Breast Carcinoma, Gynaecomastia and Fine Needle Aspiration Cytology (FNAC).

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ABSTRACT

Background: Carcinoma in male breast is very rare as compared to the female breast. Fine needle aspiration cytology is an effective modality for early diagnosis of breast lesions. Usually male breast lesions are benign which affect the young male. Most common benign lesion in males is gynaecomastia. Breast cancer accounts for a small proportion of male breast lesions. **Objective:** The aim of this study was to discern the incidence of carcinoma in male breast lesions at our tertiary care centre. **Methods:** Records of 160 male patients who underwent fine needle aspiration cytology of the palpable breast lump were collected and analyzed using percentage proportion. **Results:** In 160 male patients with breast lesions, incidence of male breast carcinoma was 4.3% which was chiefly seen in patients over 40 years of age. **Conclusion:** FNAC is a very sensitive and specific, rapid cost-effective diagnostic tool for the assessment of breast lesions in male patients.

Introduction-

According to studies, one in 30 girls born in India may develop breast cancer during her lifetime, but many people do not know that one in 400 men also contract the disease.

Carcinoma in male breast is very rare as compared to the female breast [1-3].

Many males with breast cancer have inherited a BRCA mutation, but there are other causes, including alcohol abuse and exposure to certain hormones and ionizing radiation. Cases of breast cancer in men are uncommon, occurring in 1 in 100,000 men and leading to less than 0.5% of male cancer deaths annually [4]. Risk factors include testicular abnormality, estrogenic or androgenic imbalance (or both), Klinefelter's syndrome, BRCA mutation, positive family history, obesity, radiation exposure, and liver disease [4]. Generally, men with breast cancer have lower survival rates — probably because the disease spreads rapidly due to scanty tissue in the breast area.

Men with a family history of breast cancer stand high risk as they may inherit either the BRCA1 or BRCA2 genes. Diagnosis usually begins with routine tests like mammography and ultrasound. A trucut/core biopsy or fine needle biopsy is then performed to understand the size, type and kind of breast cancer. Certain additional tests — MRI, blood tests, chest X-ray and bone scan — are also recommended to understand the extent to which the cancer has spread. Most male breast carcinoma get diagnosed at a very late stage when already it has spread to various other organs. One reason behind this is lack of awareness. Because male breast cancer is rare and many men do not realize it can affect them, they put signs of the disease down to another cause and delay visiting their doctor.

FNAC is an accurate, rapid, easy to perform and cost-effective diagnostic tool that can be carried out at outpatient department (5). It is commonly used in the diagnosis and management of breast lesions both in female and in male.

Gynecomastia has been hypothesized to be associated with male breast cancer, but no increased risk has been found [6]. Ductal carcinoma in situ accounts for approximately 5%–7% [4] of male breast cancer. Rapid growth in one breast necessitates consideration of diagnoses beyond gynecomastia and should be further investigated [7]. Ductal carcinoma in situ most often presents with bloody nipple discharge and a mass [8].

Materials and Methods-

Male Patients who visited the OPD of J.A hospital, Gwalior, with complaint of breast lump/lumps were referred to the cytopathology section of Department Of Pathology for Fine Needle Aspiration Cytology. These patients were properly examined with detailed history associated with the lesion. Informed consent was taken from the patients. FNA was then performed using 22-23 gauge needle and 20 ml syringe. Minimum 2-3 passes were made in the lesion and the aspirates were smeared in 2-3 slides. The slides were then air dried and stained with May Grunwald Giemsa (MGG) stain. DPX mountant was used and a cover slip was properly placed on the slides for microscopic examination. The diagnosis was made by experienced cytopathologists. Records consisting of this data were analyzed for results using frequency distribution and percentage proportion.

Results-

Tables no. 1,2 and figure no.1 show pattern and nature of male breast lesion at our centre.

Discussion-

Many people don't know that men can get breast cancer because they don't think of men as having breasts. In fact, both men and women have breast tissue, although men have much smaller amounts than women. However, what breast tissue a man has it still contains ducts. Cells in these ducts - like all cells in the body - can become cancerous. The cancerous cells can then enter the lymphatic vessels of the breast and grow in the lymph nodes. Once in the lymph nodes, it is likely that the malignant cells have entered the bloodstream and has spread to other areas of the body.

The incidence of breast cancer in men has increased to 1.08 in 100,000 in 1998 from 0.86 in 100,000 in 1973 [4]. Over expression of the human epidermal growth factor receptor 2 (HER2), a negative prognostic factor in women, is found less often in men [9]. Men are more frequently ER and PR positive, perhaps indicating increased proliferative activity [10].

The most common signs of breast cancer in men are lumps or swelling in the breast or lymph node, dimpling or puckering of the skin, nipple retraction, nipple discharge and scaling or redness of the nipple or surrounding skin.

In the present study, the benign lesions constituted the largest number of cases and are further subcategorized into gynaecomastia 93.7%, inflammatory 1.3% and apocrine metaplasia 0.7%.

The percentage of malignant cases was 4.3%, which was similar to findings seen with Kirana Pailoor et al (2014) [11]. This percentage was more than Siddiqui MT (2002) [12] and was less than MacIntosh et al (2008) [13], Westend et al (2002) [14] and Wauters et al (2009) [15].

Breast cancer, whether invasive or noninvasive, is exceptionally rare in young men. The prognosis in male DCIS is uncertain. Cutuli et al. observed 4 recurrences in follow-up of 27 male DCIS patients: 3 after lumpectomy and 1 after modified radical mastectomy [16]. Total mastectomy has been suggested and a recurrence following this procedure has yet to be described [17]. The National Surgical Adjuvant Breast and Bowel Project B-17 study illustrated the benefit of radiotherapy for DCIS in women [18]. Research pertaining to lumpectomy and adjuvant radiotherapy for men is sparse. Simple excision alone is often endorsed [16, 17], although some authorities maintain that total mastectomy be performed because nipple excision is usually necessary [19]. Excision of the nipple is done because the small size of the male breast typically leads to subareolar involvement [19].

Men with breast cancer have the same treatment options as women. The majority of male breast carcinoma patients have a mastectomy, which involves removal of all or some of the breast tissue and, in some cases, the removal of affected lymph nodes. To date, there have been very few in-depth studies looking at treatment for male breast cancer. Because of the rarity of male breast cancer, it has been challenging for doctors to pull together the depth of the ice berg of this problem.

Conclusion-

The rate of male breast cancer is significantly lower. Hence, it is unlikely that routine screening for the disease will be considered anytime soon, but still this problem should not be overlooked. Investigations regarding breast lump/lumps are mandatory, not only in females but males too. Educational interventions among men may prove beneficial for their awareness regarding this concealed problem. FNAC is a very sensitive and specific diagnostic tool for the assessment of breast lesions in male patients. Hence FNAC should be considered the first-line investigation in the clinical evaluation of male breast lumps.

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Conflicts of interest-

There are no conflicts of interest.

Tables and figures-

Table no.1 Pattern of Male Breast Lesions

S.No	Diagnosis	No. Of Cases	Percentage (%)
1.	Gynaecomastia	150	93.7
2.	Inflammatory	02	1.3
3.	Apocrine Metaplasia	01	0.7
4.	Carcinoma	07	4.3
	Total	160	100

Figure no.1 - Benign Vs Malignant Lesion

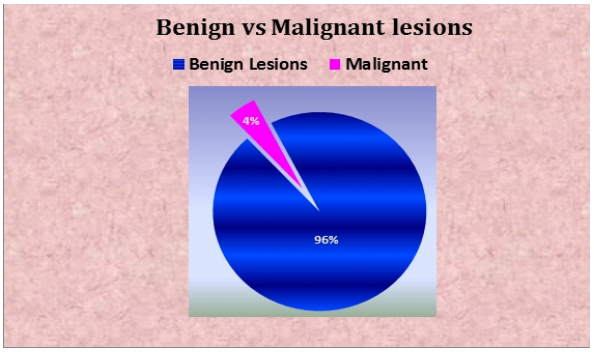
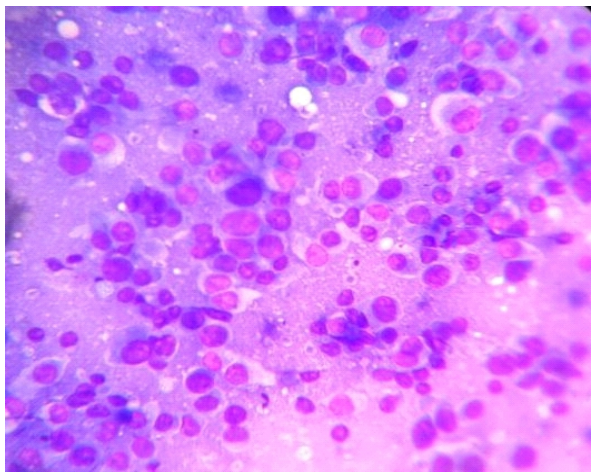


Table No.2- Age Wise Distribution of Benign and Malignant Lesions.

S.No	Age group	Benign	Malignant
1.	<20 years	62 (38.7%)	nil
2.	21-40 years	53 (33.1%)	nil
3.	41-60 years	27 (16.9%)	2 (1.3%)
4.	>60	11 (6.9%)	05 (3.1%)

Fig no. 2. Pictomicrograph showing highly cellular smear showing pleomorphic cells, altered N/C ratio, prominent nucleoli- Ductal Cell Carcinoma in male breast lesion.



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