

## A study on spectrum of male breast lesions an institutional perspective

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### Abstract

**Background:** Diseases of male breast though relatively uncommon compared to diseases of female breast, do occur, but poorly studied. These range from benign lesions to malignant diseases. Benign most commonly affect young males most common is gynecomastia. Male breast carcinoma accounts for small proportion usually present at an advanced stage. Understanding various male breast diseases is critical for timely and accurate diagnosis and management. **Aims & Objectives:** To study the spectrum of male breast diseases in relation to 1. To determine the common types of male breast diseases in the study group 2. To evaluate the age distribution of different diseases. 3. To study the modes of presentation and clinical features. 4. To evaluate management protocols of male breast disease. 5. To note the response to treatment and complications arising during follow-up. 6. To correlate clinical findings with FNAC and Histopathology. **Patients & Methods:** A prospective interventional study was carried out to observe spectrum of male breast lesions from 2017 to 2019 in the Department of General Surgery, Kakatiya Medical College, Mahatma Gandhi Memorial Hospital, Warangal, India. The total period of study was 24 months. Cases were selected from the OPD and from inpatients in the wards who presented with disorders of the breast. Proforma with relevant history, clinical examination and investigations was prepared and patients were assessed. total of 50 Male patients with breast diseases were included in the study. Type of study is Prospective study. Patients satisfying the following inclusion and exclusion criteria were enrolled in the study. All male patients with Breast Diseases between the ages of 14-75 years. Who attended the OPD and those admitted in Department of General Surgery, MGM Hospital and who were willing to undergo investigations and treatment willing for follow up. Results: 50 cases of MBD were studied. Gynecomastia was the commonest 43 cases (86%), Carcinoma 2 cases (4%) is rare. In gynecomastia Swelling of the breast was the commonest presenting complaint. 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> decades most commonly involved. Idiopathic gynecomastia most common. 18 cases were treated conservatively and rest 25 underwent surgery. Carcinoma presented in old age, in advanced stage. Conclusion: Benign breast diseases are more common male breast lesions, of them gynecomastia is most common. Carcinoma male breast is rare. Gynecomastia and other benign male breast diseases are common in young age 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> decades, Carcinoma seen in old age from 5<sup>th</sup> decade. Common mode of presentation of Gynecomastia is painless swelling of breast; Carcinoma is lump with advanced features. Gynecomastia diagnosed on basis of history, clinical features, careful systemic examination, and baseline hormonal investigations and if required cytological investigations. Managed based on aetiology. Carcinoma investigated and treated similar to female breast cancer. Subcutaneous Mastectomy most commonly performed in Gynecomastia. MRM in carcinoma. Seroma most common postoperative complication. FNAC is an important Diagnostic tool most sensitive and specific investigation in differentiating benign diseases from malignancy.

**Keywords:** Gynecomastia, Carcinoma, Lesions, Male Breast, FNAC, Benign

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### Introduction

Diseases of the male breast are uncommon, and hence poorly studied. Further, presentation is often late due to embarrassment. Because of toxic masculinity, the stigma and misplaced shame associated with lesions of the breast in male patients can have profound psychological impact, so adequate care must be taken when approaching the insecure patient. Male breast disease is often under recognized owing in part to its rarity and also to a lack of awareness. Familiarity with the salient features of the classic benign male breast conditions will allow accurate interpretation and avoid unnecessary treatment.

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Although the overall proportion of male patients is relatively small, the number of men presenting for evaluation seems to be increasing at most centres across the world.

Both benign and malignant diseases affect the male breast, with a rising incidence of male breast cancer in recent decades. The most common presentation of male patients with breast pathologies is due to gynecomastia, where cosmetic correction is sought. Approach to breast disease in male patients typically mirrors that employed in female patients. Evaluation of hormonal profile and genetic factors may be further required. Almost all male patients present with a clinical symptom such as breast pain or palpable mass. Other reported benign masses of the male breast include masses arising from the skin and subcutaneous tissues, such as lipomas, epidermal inclusion cysts are also commonly encountered. Pseudogynecomastia, which is due to excess fatty tissue deposition in the breasts, is also common, especially in patients with an elevated body mass index. Others are intraductal papilloma, pseudoangiomatous stromal hyperplasia, granular cell tumours, haemangioma, schwannoma, myofibroblastoma, and fibromatosis. Although male breast disease is most often benign, cancer of the vestigial male breast does occur. Male breast cancer is similar to breast cancer in females in its aetiology,

family history, prognosis, and treatment. Prognostic factors and current treatment regimens have been extrapolated from experiences gathered from female breast cancer.

Diseases of male breast have been underestimated and are often unmentioned in our textbooks. The literature on lesions of the male breast is voluminous, but careful studies of the subject as a whole are scant. In India, much less information is available regarding male breast disorders. Breast carcinoma are thought to be confined to females only, so most of the males do delay in seeking medical attention and have worse prognosis at the time of presentation. Furthermore, male breast malignancies suffer from under diagnoses leading to delayed treatment. So there is need of more research into this topic[1-5]

Hence, this study was conducted to analyse the spectrum of male breast diseases. The purpose of this prospective study was to describe clinical and imaging features of male breast lesions and their correlations to pathologic findings following biopsies or surgery with a view towards helping to evaluate and manage breast masses in males. Here we describe the normal male breast anatomy and present an evaluation algorithm for the male patient with breast symptoms and signs. Emphasis is placed on male breast cancer, with a discussion of its epidemiology, characteristic clinical, imaging, pathological features, prognosis and management.

To study the spectrum of male breast diseases in relation to

1. To determine the common types of male breast diseases in the study group
2. To evaluate the age distribution of different diseases.
3. To study the modes of presentation and clinical features.
4. To evaluate management protocols of male breast disease.
5. To note the response to treatment and complications arising during follow-up.
6. To correlate clinical findings with FNAC and Histopathology. The data obtained would be compared with earlier studies.

## Methodology

### Patients & methods

A prospective interventional study was carried out to observe spectrum of male breast lesions from 2017 to 2019 in the Department of General Surgery, Kakatiya Medical College, Mahatma Gandhi Memorial Hospital, Warangal, India. The total period of study was 24 months. Cases were selected from the OPD and from inpatients in the wards who presented with disorders of the breast. Proforma with relevant history, clinical examination and investigations was prepared and patients were assessed.

### Sample number

#### Age Incidence

**Table 1: Distribution According to Age showing age distribution of the patients with breast diseases (BD)**

| Age in years | No. of patients with BD | % of patients with BD |
|--------------|-------------------------|-----------------------|
| 14-20        | 8                       | 16%                   |
| 21-30        | 17                      | 34%                   |
| 31-40        | 10                      | 20%                   |
| 41-50        | 4                       | 8%                    |
| 51-60        | 7                       | 14%                   |
| 61-75        | 5                       | 10%                   |
| Total        | 50                      | 100%                  |

The age distribution of male patients with breast disease in the study group shows that most of the patients, 34% were between 21- 30 years of age. The study group does not have any patient above 75 years of age, only 10% of patients were above 60 years and 16% of patients were below 20 years of age. Majority of patients 54% were aged between 21- 40 years.

The Mean age of MBD's was found to be 36 years, Median age was 30.5 years.

The youngest patient in the study was 20 days old and the oldest being 65 yrs. old. Most of the patients are in the age group of 16 – 30 years.

A total of 50 Male patients with breast diseases were included in the study.

### Type of study

Prospective study.

Patients satisfying the following inclusion and exclusion criteria were enrolled in the study.

### Inclusion criteria

- All male patients with Breast Diseases between the ages of 14-75 years who attended the OPD and those admitted in Department of General Surgery, MGM Hospital and who were willing to undergo investigations and treatment willing for follow up.

### Exclusion criteria

- All Female patients with breast diseases.
- All male patients aged 14 years and less and above 75 years.
- History of trauma to the breast.
- Patients who are refusing any sort of treatment.

### Study done as

Screening of cases done by clinical examination in OPD and by investigations such as FNAC and when necessary, mammogram or usg was advised.

- Patients were studied and analysed in detail, with regard to; History Clinical Examination Routine Blood investigations Hormone levels (in certain cases only) FNAC Mammogram or USG (in certain cases only) and incisional or excisional biopsy (in certain cases only)
- Based on the provisional diagnosis, patients were subjected to surgery or conservative management as the case required.
- Cases were again analysed based on; Operative findings Histopathological findings Post Operative Course and outcome.
- Patients were followed up for a period ranging from 1 month to 18 months to detect any recurrence.
- Unadjusted, univariate, raw analysis of data was performed for statistical stratification[6-8]

### Results

A study was carried out on 50 male patients above 14 years to 75 years of age with breast disease at M.G.M. Hospital, Warangal over a period of two years. The data obtained was tabulated and analysed. The following observations were made.

### Incidence of Benign vs. Malignant Diseases

**Table 2: The table showing the percentage of different types of benign breast diseases in the study group**

| Type of breast disease | No. of patients with BD | % of patients with BD |
|------------------------|-------------------------|-----------------------|
| Benign                 | 48                      | 96%                   |
| Malignant              | 2                       | 4%                    |
| <b>Total</b>           | <b>50</b>               | <b>100%</b>           |

Amongst 50 patients, 48 (96%) were diagnosed with Benign Diseases Such as Gynecomastia, Pseudogynecomastia, Abscess, Lipoma, and 2 patients (4%) were diagnosed with Malignant breast disease.

#### Distribution of Male Breast Lesions

**Table 3: Distribution Of Male Breast Lesions**

| Sl. No. | Type of Lesion     | No. of cases | Percentage |
|---------|--------------------|--------------|------------|
| 1       | Gynecomastia       | 43           | 86%        |
| 2       | Pseudogynecomastia | 2            | 4%         |
| 3       | Lipoma             | 1            | 2%         |
| 4       | Sebaceous Cyst     | 1            | 2%         |
| 5       | Abscess            | 1            | 2%         |
| 6       | Carcinoma          | 2            | 4%         |
| Total   |                    | 50           | 100%       |

The most common overall and benign male breast lesion in this study was Gynecomastia accounting for 86% followed by other less common conditions including pseudogynecomastia 4%, lipoma 2%, sebaceous cyst 2%, and breast abscess 2%. Malignant lesion Carcinoma of male breast was 4%.

#### Lesion wise Age incidence:

**Table 4: Age Distribution in Different Diseases**

| Sl.No.       | Diagnosis(Lesions) | Age in groups(in years) |       |       |       |       |       | T         |
|--------------|--------------------|-------------------------|-------|-------|-------|-------|-------|-----------|
|              |                    | 14-20                   | 21-30 | 31-40 | 41-50 | 51-60 | 61-75 |           |
| 1            | Gynecomastia       | 8                       | 16    | 6     | 3     | 6     | 4     | 43        |
| 2            | Pseudogynecomastia | 0                       | 1     | 1     | 0     | 0     | 0     | 2         |
| 3            | Lipoma             | 0                       | 0     | 1     | 0     | 0     | 0     | 1         |
| 4            | Sebaceous Cyst     | 0                       | 0     | 0     | 0     | 1     | 0     | 1         |
| 5            | Abscess            | 0                       | 0     | 1     | 0     | 0     | 0     | 1         |
| 6            | Carcinoma          | 0                       | 0     | 0     | 1     | 0     | 1     | 2         |
| <b>Total</b> |                    | 8                       | 17    | 9     | 4     | 7     | 5     | <b>50</b> |
| Percentage   |                    | 16%                     | 34%   | 18%   | 8%    | 14%   | 10%   |           |

BBD: 96% of all cases are benign disorders, of these 70% are represented by early and mid-reproductive age group (2<sup>nd</sup> & 3<sup>rd</sup> & 4<sup>th</sup> decade).

Majority (34%) of them belong to age group of 21-30 years with Mean age of BBD's was 35 years, Median age was 29.5 years.

The Mean age of highest incidence of Gynecomastia is (34.86) 35 years, median was 28 years, majority 30 (70%) are within the age group of 14-40 years.

In this study youngest patient of Gynecomastia is 15 year old, eldest being of 71 years. Only 13 (30%) cases were noted between the age group of 40-75 years. There were 2 cases of pseudogynecomastia 29 years and 32 years old, Rest of the cases includes 38 year old lipoma and 52 year sebaceous cyst and 34 year old abscess. Among 50 cases studied 2 patients were diagnosed as Carcinoma, youngest patient is 45 years old, eldest being of 72 years. Mean and median age of MBC was 58.5 years.

#### Mean, Median Age and Standard Deviation (SD)

**Table 5: Showing Mean and Median ages and SD of MBD's. In years**

|              | Total | Mean age | Median Age | Standard Deviation(SD) |
|--------------|-------|----------|------------|------------------------|
| MBD          | 50    | 36       | 30.5       | 16.5                   |
| Benign BD    | 48    | 35       | 29.5       |                        |
| Gynecomastia | 43    | 35       | 28         | 16.7                   |
| MBC          | 2     | 58.5     | 58.5       |                        |

The Mean age of MBD's was found to be 36 years, Median age was 30.5 years. With SD 16.5 showing that 68% of patients are in between 19-52 years (36+/-16.5). Mean age of BBD's was 35 years, Median age was 29.5 years.

The Mean age of highest incidence of Gynecomastia is (34.86) 35 years, median was 28 years. With SD 16.7 showing that 68% of patients are in between 18-52 years (35+/-16.5).

Mean and median age of MBC was 58.5 years.

#### Mode of presentation of Male Breast Diseases

The most common presenting complaint noted was swelling of the breast, in 50 patients of which 26 (52%) patients presented with only Swelling, 12 (24%) presented with Swelling associated with pain, 6 (12%) with lump and 2 (4%) with lump, pain.

The next common complaint was lump noted in 8 patients of which 6 (12%) presented with only lump as a complaint, Only 1 patient (2%) presented with Ulcer. And another 1 patient (2%) presented with fever pain and lump.

**Table 6: The table showing presenting complaints of the study group**

| Presenting complaints | No. of patients with BBD | % of patients with BBD |
|-----------------------|--------------------------|------------------------|
| Swelling              | 26                       | 52%                    |
| Pain                  | 2                        | 4%                     |
| Lump                  | 6                        | 12%                    |
| Swelling+Pain         | 12                       | 24%                    |
| Lump+Pain             | 2                        | 4%                     |
| Fever+Lump+Pain       | 1                        | 2%                     |

|              |    |      |
|--------------|----|------|
| Ulcer        | 1  | 2%   |
| <b>Total</b> | 50 | 100% |

**Duration Of Symptoms****Table 7: Duration Of Symptoms**

| Sl. No.      | Diagnosis          | Duration of symptoms (Months) |     |      |     |
|--------------|--------------------|-------------------------------|-----|------|-----|
|              |                    | <1                            | 1-6 | 7-12 | >12 |
| 1            | Gynecomastia       | 0                             | 22  | 15   | 6   |
| 2            | Pseudogynecomastia | 0                             | 1   | 1    | 0   |
| 3            | Lipoma             | 0                             | 1   | 0    | 0   |
| 4            | Sebaceous Cyst     | 0                             | 1   | 0    | 0   |
| 5            | Abscess            | 1                             | 0   | 0    | 0   |
| 6            | Carcinoma          | 0                             | 0   | 0    | 2   |
| <b>Total</b> |                    | 1                             | 25  | 16   | 7   |
| Percentage   |                    | 2%                            | 50% | 32%  | 14% |

82% of patients with benign presented within 12 months, and 14% of patient, presented after 1 year. 50% of Gynecomastia patients presented between 1-6 months, Abscess Patient presented within 1 month. Both of 2 Carcinoma patients presented after 1 year of duration.

**Table 8: Distribution of disorders according to breast side**

| Sl.No.       | Lesions            | Side |     |      |
|--------------|--------------------|------|-----|------|
|              |                    | Rt   | Lt  | Both |
| 1            | Gynecomastia       | 12   | 20  | 11   |
| 2            | Pseudogynecomastia | 0    | 0   | 2    |
| 3            | Lipoma             | 1    | 0   | 0    |
| 4            | Sebaceous Cyst     | 0    | 1   | 0    |
| 5            | Abscess            | 1    | 0   | 0    |
| 6            | Carcinoma          | 1    | 1   | 0    |
| <b>Total</b> |                    | 15   | 22  | 13   |
| Percentage   |                    | 30%  | 44% | 26%  |

**Past relevant history/Factors in Male breast Lesions**

No important relevant history recorded in 16 patients (32%), where as

Ingestion of drugs for any cause precipitating gynecomastia in 6 patients (12%), Smoking of cigarettes in 6 patients (12%), alcohol abuse in 5 patients (10%),

Primary hypogonadism due to Klinefelter syndrome presented with bilateral gynecomastia and undescended testis in 1 patient (2%).

**Table 9: Past relevant history/Factors in Male breast Lesions**

| Relevant factors | Gynecomastia |    | Breast Cancer |   | Other Benign |    | Total |     |
|------------------|--------------|----|---------------|---|--------------|----|-------|-----|
|                  | No.          | %  | No.           | % | No.          | %  | No.   | %   |
| Hypogonadism     | 1            | 2  | -             | - | -            | -  | 1     | 2   |
| Drugs            | 6            | 12 | -             | - | -            | -  | 6     | 12  |
| Tumours          | -            | -  | -             | - | -            | -  | -     | -   |
| Alcohol abused   | 4            | 8  | 1             | 2 | -            | -  | 5     | 10  |
| Smoking          | 5            | 10 | 1             | 2 | -            | -  | 6     | 12  |
| Idiopathic       | 16           | 32 | -             | - | -            | -  | 16    | 32  |
| Other            | 11           | 22 | -             | - | 5            | 10 | 16    | 32  |
| <b>Total</b>     | 43           | 86 | 2             | 4 | 5            | 10 | 50    | 100 |

**Size of Lesions****Table 10: Distribution of the Sample by Size of Lesion & Clinical Conditions**

| Sl.No.       | Lesions            | Size |        |       | Total |
|--------------|--------------------|------|--------|-------|-------|
|              |                    | <2cm | 2-5 cm | >5 cm |       |
| 1            | Gynecomastia       | 2    | 16     | 25    | 43    |
| 2            | Pseudogynecomastia | 0    | 1      | 1     | 2     |
| 3            | Lipoma             | 0    | 1      | 0     | 1     |
| 4            | Sebaceous Cyst     | 0    | 1      | 0     | 1     |
| 5            | Abscess            | 0    | 1      | 0     | 1     |
| 6            | Carcinoma          | 0    | 2      | 0     | 2     |
| <b>Total</b> |                    | 2    | 22     | 26    | 50    |
| Percentage   |                    | 4%   | 44%    | 52%   | 100%  |

Majority of lumps (52%) in the present study averaged more than 5 cms in size. 44% were 2 to 5 cms, 4% were size less than 2 cms. Benign breast lumps, especially gynecomastia are of size more than 2 cms.

**Clinical findings management of Gynecomastia**

**Table 11 A: showing History and clinical findings management of Gynecomastia**

| No       | etiology      | No.of Patients | Age   | General Physical Examination      | Testis Examination      | Breast Examination                  | Investigations                           | Management   |          |
|----------|---------------|----------------|-------|-----------------------------------|-------------------------|-------------------------------------|--|--------------|----------|
|          |               |                |       |                                   |                         |                                     |  | Conservative | Surgical |
| 1        | Pubertal      | 5              | <20   | N                                 | N                       | Concentric swelling                 | -  | 3            | 2        |
| 2        | Aging         | 8              | >56   | N                                 | N                       | Concentric Swelling, eccentric Lump | USG, FNA                                 | 4            | 4        |
| 3        | Drugs         | 6              | -     | N                                 | N                       | Concentric swelling                 | -  | 6            | -        |
| 4        | Hypogonadism  | 1              | 20    | Tall, Slender, Absent Sec sex ch. | Rt Small Lt Undescended | Bilateral Concentric Swelling       | Chromatin Study                          | 1            | -        |
| 5        | Liver Failure | 4              | -     | Features Of liver Failure         | N                       | Concentric swelling                 | LFT                                      | 4            | -        |
| 6        | Idiopathic    | 19             | 20-55 | N                                 | N                       | Concentric Swelling, pain/ Tender   | Sr. LH, Sr. T, Sr. E2, Sr. Hcg, USG, FNA | -            | 19       |
| <b>T</b> |               | 43             |       |                                   |                         |                                     |  | 18           | 25       |
| <b>%</b> |               | 100            |       |                                   |                         |                                     |  | 42%          | 58%      |

6 patients (13.9%) gave history of ingestion of different types of drugs. Drugs are spironolactone in 2 patients, digoxin in 1 patient, amiodarone in 1 patient, dutasteride in 1 patient, isoniazide in 1 patient. Persistent pubertal gynecomastia occur in 5 patients 11.6%, aging related in 8 patients 18.6%, No detectable abnormality in 19 patients 44.2%, Cirrhosis in 4 patients 9.4%, primary hypogonadism in 1 patient 2%.

One patient 2.3% with Primary hypogonadism presented with bilateral gynecomastia, small rt testis, undescended lt testis, absent secondary sexual characteristics, tall slender personality, diagnosed as Klinefelter syndrome. Treated conservatively. On local examination of breast, swelling is concentric and retroareolar in most cases, few 4 patients with age related gynecomastia presented with eccentric lump, investigated further with USG, FNAC, managed with SCM. In 43 Gynecomastia patients 5 patients diagnosed as pubertal gynecomastia and observed with follow up for every 3 months, symptoms regressed spontaneously within 1 year in 2 patients, within 2 years in 1 patient. Whereas 2 patients underwent surgery after 1 year follow up for cosmetic purposes.

8 patients diagnosed as gynecomastia related to aging, 4 managed conservatively, remaining 4 operated in view of suspicious lump.

6 patients diagnosed as drug related and the offending agents stopped and on followup all showed spontaneous regression in 1-3 months.

1 patient with primary hypogonadism due to Klinefelter syndrome managed conservatively.

4 patients with alcohol abuse and liver failure features managed conservatively. In 19 patients no cause identified managed with surgery.

Surgery done in gynecomastia patients is Subcutaneous Mastectomy.

**Hormone Levels In patients with Gynecomastia**

**Table 11 B: Hormone Levels In patients with Gynecomastia**

| Sl.No | Gynecomastia         | LH | T     | E <sub>2</sub> | hCG | LFT | TSH |
|-------|----------------------|----|-------|----------------|-----|-----|-----|
| 1     | Pubertal             | N  | N(LL) | N(UL)          | N   | N   | N   |
| 2     | Aging                | ↑  | ↓     | ↑              | N   | N   | N   |
| 3     | Drugs                | -  | -     | -              | -   | -   | -   |
| 4     | Liver failure        | N  | N     | ↑              | N   | ↑   | N   |
| 5     | Primary Hypogonadism | ↑  | ↓     | ↑              | N   | -   | -   |
| 6     | Idiopathic           | N  | N     | N              | N   | N   | N   |

In puberty related gynecomastia testosterone levels are normal (N) near lower limit (LL) with normal hCG, and LH. There is relative increase in E/T Ratio (Estrogen/ testosterone).

In aging related gynecomastia testosterone levels are decreased, estrogen levels elevated with elevated LH and normal hCG.

In liver failure related gynecomastia estrogen levels elevated with deranged liver enzymes.  
 In Primary Hypogonadism testosterone levels are decreased, estrogen levels elevated with elevated LH and normal hCG.  
 In idiopathic gynecomastia all hormone levels are in normal range.

**Presentation And Management Of other Benign Breast Lesions**

**Table 12: Presentation And Management Of other Benign Breast Lesions**

| No | Aetiology          | No.of Patients | Breast Examination | Investigations  | Management   |          |
|----|--------------------|----------------|--------------------|-----------------|--------------|----------|
|    |                    |                |                    |                 | Conservative | Surgical |
| 1  | Pseudogynecomastia | 2              | B/L Swelling,Obese | USG, FNA        | 2            | -        |
| 2  | Lipoma             | 1              | Lump 4,            | USG, FNA        | -            | 1        |
| 3  | Sebaceouscyst      | 1              | Lump with punctum  | USG, FNA        | -            | 1        |
| 4  | Abscess            | 1              | Lump, pain, fever  | USG, Aspiration | -            | 1        |
| T  |                    | 5              |                    |                 | 2            | 3        |

2patients diagnosed as Pseudogynecomastia, patients are obese with high BMI,managed conservatively, with weight reduction.  
 1Patient with lipoma excision done.  
 1patient with sebaceous cyst excision done.  
 1patient with abscess, incision and drainage done.

**Presentation and management of Carcinoma Male Breast**

Two cases were found to be carcinoma of the breast. These patients were aged 45 and 72 years. One patient had presented with ulcer and lump of the breast. The other patient had presented with eccentric lump. In the latter patient, the primary tumour was traced to the right breast, which had induration and nipple retraction, which the patient had ignored.  
 Patient with ulcer with edge biopsy showed infiltrating ductal ca, and the other with FNAC showed ductal cell ca. Both showed no nodal involvement and no distant metastasis. Histopathology revealed infiltrative ductal carcinoma in both cases.

**Table 13: Showing presentation and management of Carcinoma Male Breast**

| Case  | Age | Duration                     | Local examination           | Staging            | Investigations                                | Management                | HPE                        |
|-------|-----|------------------------------|-----------------------------|--------------------|---|---------------------------|----------------------------|
| Case1 | 45  | 2yearslump,<br>2months ulcer | Ulcer, Eccentric hard lump, | T4 N0M0<br><br>IIB | Edge Biopsy-<br><br>InfiltratingDuctal cellca | SurgeryMRM<br><br>CT(CAF) | InfiltratingDuctal cell ca |
| Case2 | 72  | 2years                       | Eccentric<br>hard lump3*2   | T2 N0M0<br><br>IIA | FNA-<br>Ductal cellca                         | SurgeryMRM                | InfiltratingDuctal cell ca |

**Management of Male Breast Diseases**

Of 50 patients 20 patients were managed conservatively, 30 were operated.  
 In 43 Gynecomastia patients 18 patients managed conservatively 25 patients managed with surgery.  
 Surgery done in all gynecomastia patients is Subcutaneous Mastectomy.  
 1patients diagnosed as Pseudogynecomastia, patients are obese with high BMI, managed conservatively, with weight reduction. 1 Patient with lipoma excision done. 1 patient with sebaceous cyst excision done. 1 patient with abscess, incision and drainage done. 2 patients diagnosed as carcinoma, modified radical mastectomy was done.

**Table 14: Showing Management of Different Male breast Lesions**

| No.   | Diagnosis          | No. OfCases | Conservative | Surgical |          |     |     |
|-------|--------------------|-------------|--------------|----------|----------|-----|-----|
|       |                    |             |              | SCM      | Excision | I&D | MRM |
| 1     | Gynecomastia       | 43          | 18           | 25       | -        | -   | -   |
| 2     | Pseudogynecomastia | 2           | 2            | -        | -        | -   | -   |
| 3     | Lipoma             | 1           | -            | -        | 1        | -   | -   |
| 4     | Sebaceous Cyst     | 1           | -            | -        | 1        | -   | -   |
| 5     | Abscess            | 1           | -            | -        | -        | 1   | -   |
| 6     | Carcinoma          | 2           | -            | -        | -        | -   | 2   |
| Total |                    | 50          | 20           | 30       |          |     |     |
| %     |                    |             | 40%          | 60%      |          |     |     |

**Correlation of Fine Needle Cytology with Histopathological Diagnosis**

**Table 15: Correlation of Fine Needle Cytology with Histopathological Diagnosis**

| No. | Clinical Diagnosis | No. ofCases | FNAC    |                      |   | HPE     |                      |   |
|-----|--------------------|-------------|---------|----------------------|---|---------|----------------------|---|
|     |                    |             | Done in | Diagnosis Consistent | % | Done in | Diagnosis Consistent | % |
|     |                    |             |         |                      |   |         |                      |   |

|   |                    |           |           |           |          |           |           |          |
|---|--------------------|-----------|-----------|-----------|----------|-----------|-----------|----------|
| 1 | Gynecomastia       | 43        | 25        | 23        | 92       | 25        | 25        | 100      |
| 2 | Pseudogynecomastia | 2         | 2         | 2         | 100      | -         | -         | -        |
| 3 | Lipoma             | 1         | 1         | 1         | 100      | 1         | 1         | 100      |
| 4 | Sebaceous Cyst     | 1         | 1         | 1         | 100      | 1         | 1         | 100      |
| 5 | Abscess            | 1         | -         | -         | -        | -         | -         | -        |
| 6 | Carcinoma          | 2         | 2         | 2         | 100      | 2         | 2         | 100      |
|   | <b>Total</b>       | <b>50</b> | <b>31</b> | <b>31</b> | <b>-</b> | <b>29</b> | <b>29</b> | <b>-</b> |

In 43 patients the clinical diagnosis was gynecomastia, of them idiopathic with no cause identified in 19 patients and few age related gynecomastia with atypical presentation total 25 were investigated with FNAC, USG. In 23 patients FNA showed proliferation of fibroglandular tissue impression suggestive of gynecomastia, in 2 patients it is inconclusive. USG showed subareolar hypoechoic disc shaped areas. HPE after surgery in all 25 patients report was gynecomastia.

In two patients diagnosed as pseudogynecomastia FNAC showed only fibrofatty tissue and no glandular elements.

In lipoma FNAC showed mature adipocytes arranged in clusters findings consistent with HPE.

In Sebaceous cyst also features on FNAC consistent with HPE.

In one case of MBC with lump FNAC showed ductal cell carcinoma, HPE infiltrating ductal cell ca. Other MBC presented with ulcer investigated with edge biopsy showed infiltrating ductal ca. findings consistent with HPE.

### Postoperative Complications

**Table 16: Postoperative Complications**

|   | Complication    | No. Of Cases | Percentage |
|---|-----------------|--------------|------------|
| <b>Subcutaneous Mastectomy 25 Cases</b> |                 |              |            |
| 1                                       | Wound Infection | 1            | 4%         |
| 2                                       | Seroma          | 1            | 4%         |
| 3                                       | Hematoma        | 0            | 0          |
| <b>MRM 2 Cases</b>                      |                 |              |            |
| 1                                       | Wound Infection | 0            | 0          |
| 2                                       | Seroma          | 1            | 50%        |
| 3                                       | Flap Necrosis   | 0            | 0          |
| 4                                       | Arm Oedema      | 0            | 0          |

### Discussion

The present study was carried out among the male patients with breast diseases attending the department of surgery at Mahatma Gandhi Memorial hospital attached to Kakatiya medical college. A total of 50 patients were studied.

In present study among 50 patients, 48 cases (96%) were diagnosed with Benign Diseases Such as Gynecomastia, Pseudogynecomastia, Abscess, Lipoma, and 2 cases (4%) were diagnosed with Malignant breast disease.

The most common overall and benign male breast lesion in this study was Gynecomastia accounting for 86% (43 cases) followed by other less common conditions including pseudogynecomastia 4% (2 cases), lipoma 2% (1 case), sebaceous cyst 2% (1 case), breast abscess 2% (1 case). Malignant lesion Carcinoma of male breast was 4% (2 cases).

Gynecomastia (86%) was the most common MBD encountered while MBC constitute 4% of the patients.

- According to Ramji AN. Int Surg J.[16] the incidence of Gynecomastia is 66.66% and MBC 9.52%. Lipoma is 4.76%, Abscess is 4.76%, Sebaceous cyst is 4.76%.
- According to Raajul Jain et. Al.[17] the incidence of Gynecomastia is 46.67% and MBC 16.67%. Lipoma is 6.67%, Abscess is 6.67%.
- Malignant breast lesions comprised 23.34% of the total. Most common malignant lesion was infiltrating ductal carcinoma (16.67%), followed by Malignant epithelial tumour- Eccrine /Breast origin (6.62), Metastatic breast lesion (3.34).
- Safa M. Al-Obaidi<sup>18</sup> reported Gynecomastia 82.8%, MBC 5.38%. Lipoma is 4.3%, Abscess is 2.15%.

Present study incidence of gynecomastia is consistent with Safa M. Al-Obaidi[18].

Gill et al.[27] One hundred and fifty cases of male breast diseases were diagnosed during study Period.

Majority (74%) of the specimens were various benign conditions the most common being gynecomastia (88 cases out of 111).

Other benign conditions included duct ectasia (11 cases), non-specific inflammation (6 cases), fibroadenoma and hemangioma (2 cases each)

and a single case of benign blue cell nevus.

Malignant tumours comprised 26% (39 cases) of the total male breast disorders, most common (82%) being infiltrating ductal carcinoma According to all above mentioned studies Gynecomastia is the most common.

The age distribution of male patients with breast disease in the study group shows that most of the patients, 34% were between 21- 30 years of age. The study group does not have any patient above 75 years of age, only 10% of patients were above 60 years and 16% of patients were below 20 years of age.

Majority of patients 52% were aged between 21- 40 years. The mean age was found to be 36 years.

The youngest patient in the study was 15 years old with gynecomastia and the oldest being 72 yrs. old with carcinoma.

Most of the patients are in the age group of 14- 40 years. 96% of all cases are benign disorders, of these 70% are represented by early and mid reproductive age group (2nd & 3rd & 4th decade). Majority (34%) of them belong to age group of 21-30 years with average age being 35 years. In the present study majority of the patients are in the age group 21-30 years (34%) while according to Ramji AN. Int Surg J. peak incidence of Male Breast Disorders is between 21-30 years 42.85% similar to our study.

#### Gynecomastia

Youngest patient in this series is 15 year old with gynecomastia, eldest being 72 year old with breast carcinoma.

30 cases (70%) of gynecomastia occurred between age group 14-40 years. The corresponding literature of Ramji AN. Int Surg J. reported 14 cases (66.45%); Safa M. Al-Obaidi reported 59 cases (63.45%).

The mean age of highest incidence of Gynecomastia is 26.25 years, majority (62%) are within the age group of 14-40 years.

In this study youngest patient of Gynecomastia is 15 year old, eldest being of 71 years. Only 12 cases were noted between the age group of 40-75 years. Safa M. Al-Obaidi age distribution of gynecomastia in our study varied from the highest (25.81% and 21.51%) in the 2nd and 3rd decades, respectively; to the lowest (6.45% & 12.9%) in the 6th and 5th decades, respectively.

Gill MS. et al as well as Anderson WF et al[28] , the peak incidence of age in gynecomastia occurs during puberty, with peaking around 14years old. More than half (51.72%) of these patients presented during the 3rd decade of life[27].

Sazan, Lubab and Nada[29] reported that the peak incidence of gynecomastia in the 2nd decade is 23.4%.

#### MBC

Among 50 cases studied 2 patients were diagnosed as Carcinoma, youngest patient is 45 years old, eldest being of 72 years.

MBC accounts for 4% (2 cases) in present study ages are 45yrs and 72yrs, Ramji AN. Int Surg J. found the incidence to be 9.52% (2 cases) 48yrs, 55yrs,

Safa M. Al-Obaidi reported 5.38% (5 cases) between 40-69yrs, breast cancer is reported in the 5th decade forward of a total (5.37%). While breast cancer peak distribution is equal in the 5th and 6th decades(2.15%).

Sazan, Lubab and Nada reported carcinoma of breast is (9.7%) mostly after the age of 50 years old.

Gill et al. Most (68.4%) of the patients with malignancy presented in 5th, 6th and 7th decade of life. The age range was 30 to 78 years.

#### Other Benign

There were 2 cases of pseudogynecomastia 29 years and 32 years old, Rest of the cases includes 38 year old lipoma and 52 year sebaceous cyst and 34 year old abscess.

In this study Mean age of MBD's was found to be 36 years, with SD 16.5 showing that 68% of patients are in between 19-52 years (36+/-16.5).

In Ramji AN. Int Surg J. mean age was 31.5 years with SD 11.6. In Raajul Jain et. al. Mean was 41.5 years.

Median age was 30.5 years in our study, in Raajul Jain et. al. median was 40 years. Mean age of BBD's was 35 years; Median age was 29.5 years, in Raajul Jain et. al. mean age was 28 years.

The Mean age of highest incidence of Gynecomastia is (34.86) 35 years, median was 28 years. With SD 16.7 showing that 68% of patients are in between 18-52 years (35+/-16.5). In Raajul Jain et. al. mean age was 42 years. Mean and median age of MBC was 58.5 years. in Raajul Jain et. al. mean age was 63 years. Gill et al. mean age was 52.6 years.

#### Mode Of Presentation

In the present study the most common presenting complaint noted was swelling of the breast, in 50 patients of which 26 (52%) patients presented with only swelling, 12 (24%) presented with Swelling associated with pain, 6 (12%) with lump, painful lump in 2 (4%), and 1 (2%) with lump, pain and fever, 1(2%) ulcer.

The findings of the present study correlate with the findings of the study mentioned above.

The commonest type of presentation of MBD was swelling of the breast constituting 52% in this study and swelling with pain 24%.

- According to Ramji AN. Int Surg J. states that the most common presenting symptom was swelling of the breast 15(71.42%), followed by lump in 2 (9.52%), pain in 2 (9.52%), Ulcer in 1 (4.76%).
- According to Safa M. Al-Obaidi most common presenting symptom was painless mass 48(51.61%), followed by painful mass in 38 (40.86%), pain in 7(7.53%),

There were 1 case (2%) of pain, fever, lump in this study being abscess and 1 case (2%) of ulcer being carcinoma

Gynecomastia most commonly present with painless swelling of breast, whereas the symptoms in Carcinoma are painless lump and ulcer.

In this study one patient with Primary hypogonadism presented with bilateral gynecomastia, small rt testis, undescended Lt testis, absent secondary sexual characteristics, tall slender personality, diagnosed as Klinefelter syndrome. Treated conservatively.

On local examination of breast, swelling is concentric and retroareolar in most cases, few 4 patients with age related gynecomastia presented with eccentric lump, investigated further with USG, FNAC, managed

with SCM.

#### Duration Of Symptoms

In the present study 82% of patients with benign presented within 12 months, and 14% of patient, presented after 1 year. 50% of Gynecomastia patients presented between 1-6 months, Abscess Patient presented within 1 month. Both of 2 Carcinoma patients presented after 1 year of duration.

#### Side Distribution

Most common side involved, with all the male breast disorders taken into consideration was left, which is in accordance with the study mentioned above.

Safa M. Al-Obaidi study also shows that left breast (59.14%) was more commonly involved as compared to the right.

In the present study most common side involved in Gynecomastia was left 20(40%) followed by right 12(24%). In carcinoma both sides were equally involved.

In Ramji AN. Int Surg J. Bilateral involvement 38.09% was more common, followed by right side 33.33%, and left only 28.57%. Sazan, Lubab & Nada reported bilateralism in (8.9%) all were with gynecomastia, while different disorders involve left breast in (53.2%) and right side in (37.9%).

Gill et al. Patients with gynecomastia revealed a slight predominance (40%) of right breast involvement, however both breasts were affected in about 25% of the cases.

#### Size of Lesion

Majority of lumps (52%) in the present study averaged more than 5 cms in size. 44% were 2 to 5 cms, 4% were size less than 2 cms. Benign breast lumps, especially gynecomastia are of size more than 2 cms.

In Safa M. Al-Obaidi study ingestion of drugs for any cause play an important past relevant history in precipitating gynecomastia in 42 patients(45.16%) ,smoking of cigarettes in 11patients(11.83%), alcohol abuse in 8 patients (8.6%) on the other hand ,no important relevant history recorded in 16 patients (17.2%) involved in this study.

In our study no important relevant history recorded in 16 patients (32%), whereas ingestion of drugs for any cause precipitating gynecomastia in 6 patients (12%), smoking of cigarettes in 6 patients (12%), and alcohol abuse in 5 patients (10%), hypogonadism secondary to Klinefelter syndrome presented with bilateral gynecomastia and undescended testis in 1 patient (2%), no tumours recorded as relevant history.

In Glass AR, et al<sup>30</sup> Plourde PV et al<sup>31</sup> and Ewertz M, et al<sup>32</sup> showing that persistent pubertal gynecomastia occur in 25%. Drugs in (10-25%), no detectable abnormality in 25%, Cirrhosis or malnutrition in 8%, primary hypogonadism in 8%, testicular tumours in 3%, secondary hypogonadism in 2%, hyperthyroidism in 1.5%, Chronic renal insufficiency in 1%.

In Safa M. Al-Obaidi study 42 patients (45.16%) gave history of ingestion of different types of drugs. hyperoestrogenisation in men can be caused either by oestrogen agonist drugs as digoxin ,spironolactone, or oestrogen hormone therapy ;this group represent 11 patients (11.83%) of patients; or by testosterone target cell inhibitors which is taken by 17 patients (18.28%) of total patients; or the third group; drugs that causing Hyperprolactinemia (methyldopa & phenothiazines) reported in 14 patients (15.05%); on the other hand 51 patients (54.88%) with no history of drug association.

In Ramji AN. Int Surg J. most cases, it is idiopathic, no specific etiological factor was identified.

In our study 6 patients (13.9%) gave history of ingestion of different types of drugs. Drugs are spironolactone in 2 patients, digoxin in 1 patient, amiodarone in 1 patient, dutasteride in 1 patient, isoniazid in 1 patient. Persistent pubertal gynecomastia occur in 5 patients 11.6%, aging related in 8 patients 18.6%, no detectable abnormality in 19 patients 44.2%, Cirrhosis in 4 patients 9.4%, primary hypogonadism in 1 patient 2.3%.

#### Hormone Levels In patients with Gynecomastia

In this study puberty related gynecomastia testosterone levels are



normal (N) near lower limit (LL) with normal hCG, and LH. There is relative increase in E/T Ratio (Estrogen/testosterone).

In aging related gynecomastia testosterone levels are decreased, estrogen levels elevated with elevated LH and normal hCG.

In liver failure related gynecomastia estrogen levels elevated with deranged liver enzymes.

In Primary Hypogonadism testosterone levels are decreased, estrogen levels elevated with elevated LH and normal hCG.

In idiopathic gynecomastia all hormone levels are in normal range.

Ronald S Swerdloff *et al.* All patients who present with gynecomastia should have serum testosterone, estradiol, LH and hCG measured (using an assay that detects all forms of hCG). Further testing should be tailored according to the history,

physical examination and the results of these initial tests.

An elevated beta-HCG or a markedly elevated serum estradiol suggests neoplasm and a testicular ultrasound is warranted to identify a testicular tumour, keeping in mind, however, other non-testicular tumours can also secrete hCG. A low testosterone level, with an elevated LH and normal to high estrogen level indicates primary hypogonadism.

If the history suggests Klinefelter syndrome, then a karyotype should be performed for definitive diagnosis.

Low testosterone, low LH and normal estradiol levels indicate secondary hypogonadism, and hypothalamic or pituitary causes should be sought.

If testosterone, LH and estradiol levels are all elevated, then the diagnosis of androgen resistance should be considered.

Liver, kidney and thyroid function should be assessed if the physical examination suggests liver failure, kidney failure, or hyperthyroidism, respectively. A chest x-ray should be done if a lung or mediastinal lesion is suspected.

Furthermore, if examination of breast tissue suggests malignancy, a biopsy should be performed.

This is of particular importance in patients with Klinefelter syndrome, who have an increased risk of breast cancer. On the other hand, if the examination finding is compatible with breast abscess, then fine needle aspiration for microscopy, acid-fast bacilli and culture is warranted.

#### Presentation of Carcinoma Breast In Males

Van Geel AN, *et al.* and Heller KS, *et al.* described that nipple involvement is a fairly early event, with retraction in 9%, discharge in 6%, and ulceration in 6%, although ulceration was separate from the nipple in half the cases, with a mean age of 60 years.

Gupta N, *et al.* described that fixed painless hard mass with retraction ulceration, nipple discharge, and enlarged axillary lymph node are likely to be signs of malignancy.

Clinical breast examination is the key in evaluation of palpable mass in men, and it is found to be important in assessing grade of gynecomastia and further evaluation may or may not be necessary, by using Hoffman Kohn scale adapted by McKinny & Simon, because there is no convincing evidence to link gynecomastia with male breast cancer [10-12]

In our study two cases were found to be carcinoma of the breast. One patient had presented with ulcer and lump of the breast. The other patient had presented with eccentric lump. In the latter patient, the primary tumour was traced to the right breast, which had induration and nipple retraction, which the patient had ignored. These patients were aged 45 and 72 years, whereas in literature, the average age of presentation is 68 years. Both patients evaluated patient with ulcer with edge biopsy showed infiltrating ductal ca, and the other with FNAC showed ductal cell ca. Both showed no nodal involvement and no distant metastasis. Histopathology revealed infiltrative ductal carcinoma in both cases.

#### Management of Male Breast Lesions

Anderson WF *et al.*<sup>28</sup> Pubertal gynecomastia often regresses spontaneously within six months, 75% within two years of onset, and 90% resolved within three years of onset.

#### USG

In our study USG indicated in 19 idiopathic gynecomastia with no cause identified patients and few age related gynecomastia with atypical presentation total 25 patients, similar to FNAC. And in other benign lesions and in MBC.

Most of gynecomastia showed presented as generalized prominent proliferation of fibro-glandular tissue unilaterally or bilaterally, in few Multiple ill defined masses as well as retroareolar ill defined mass.

Breast cancer on the other hand, presented ultrasonographically with retroareolar and with eccentric ill defined mass.

Doonegan and Gunhan *et al* documented that ultrasonography alone is not a reliable technique to distinguish male breast carcinoma from other aetiologies, where false positive result may be seen in abscess, gynecomastia, and fat necrosis. The main stay in diagnosis of different male breast disorders is fine needle aspiration & /or excisional biopsy which should be the integral part of the primary assessment of breast lumps in male.

#### Management

In our study of 50 patients 20 patients were managed conservatively, 30 were operated.

In 43 Gynecomastia patients 5 patients diagnosed as pubertal gynecomastia and observed with follow up for every 3 months, symptoms regressed spontaneously within 1 year in 2 patients, within 2 years in 1 patient. Whereas 2 patients underwent surgery after 1 year follow up for cosmetic purposes.

8 patients diagnosed as gynecomastia related to aging, 4 managed conservatively, remaining 4 operated in view of suspicious lump.

6 patients diagnosed as drug related and the offending agents stopped and on follow up all showed spontaneous regression in 1-3 months.

1 patient with primary hypogonadism due to Klinefelter syndrome managed conservatively.

4 patients with alcohol abuse and liver failure features managed conservatively. In 19 patients no cause identified managed with surgery. Surgery done in all gynecomastia patients is Subcutaneous Mastectomy. 2 patients diagnosed as Pseudogynecomastia, patients are obese with high BMI, managed conservatively, with weight reduction.

1 Patient with lipoma excision done.

1 patient with sebaceous cyst excision done.

1 patient with abscess, incision and drainage done, pus for culture and sensitivity and Stain for Acid Fast Bacilli sent, organism was *Staphylococcus epidermidis*.

1 patient diagnosed as carcinoma, modified radical mastectomy was done.

#### Comparison between clinical diagnosis, FNAC report and HPE report of patients with MBD

Sazan, Lubab and Nada in 2008 reported gynecomastia being diagnosed by FNAC in (13.6%) and Amrikachi *et al.*<sup>39</sup> 2001 (9%) who reported that apocrine metaplasia and epithelial atypia are common finding in gynecomastia; adding that the attention should be directed toward the pattern of the cells.

All the cases of breast cancer diagnosed by histopathological examination which reveal neoplasia and pleomorphism implicated for infiltrative ductal carcinoma 100% (5 of 5 cases).

Giordano *et al.*<sup>40</sup> although there are many other subtypes for carcinoma of breast but the predominant histological type of disease in all literatures is invasive ductal, which forms more than 90% of all male breast tumours.

In this study most common MBD is Gynecomastia (43 cases) according to clinical diagnosis.

The FNAC report shows that the commonest MBD is Gynecomastia (23 out of 25 cases).

As per HPE report Gynecomastia (25 cases) is the commonest MBD, followed by Lipoma (1 case) and sebaceous cyst (1 case, and infiltrating ductal ca (2 cases). FNAC And HPE was not done in 18 cases of gynecomastia as no indication.

In 43 patients the clinical diagnosis was gynecomastia, of them 19 idiopathic with no cause identified patients and few age related

gynecomastia with atypical presentation total 25 patients are investigated with FNAC. In 23 patients FNA showed proliferation of fibroglandular tissue impression suggestive of gynecomastia, in 2 patients it is inconclusive. HPE after surgery in all 25 patients report was gynecomastia.

In two patients diagnosed as pseudogynecomastia FNAC showed only fibrofatty tissue and no glandular elements.

In lipoma FNAC showed mature adipocytes arranged in clusters findings consistent with HPE.

In Sebaceous cyst also features on FNAC consistent with HPE.

In one case of MBC with lump FNAC showed ductal cell carcinoma, HPE infiltrating ductal cell ca. Other MBC presented with ulcer investigated with edge biopsy showed infiltrating ductal ca. findings consistent with HPE.

FNAC is a very useful tool in diagnosing male breast diseases and in differentiating benign diseases from malignancy, it is a more accurate diagnostic tool as compared to clinical findings and can avoid unnecessary surgery.

However compared to biopsy and histopathological examination FNAC is less accurate.

Hence recently true cut biopsy is being preferred over FNAC as more tissue is obtained for examination with diagnostic accuracy similar to HPE.

#### Postoperative Complications

Out of 25 subcutaneous mastectomy surgeries, 1 patient 4% had wound infection, 1 patient 4% had seroma, and no one developed Following MRM out of 2 patients 1 developed 50 % seroma, and no flap necrosis.

A prospective interventional study was carried out to observe spectrum of male breast lesions from 2017 to 2019 in the Department of General Surgery, Kakatiya Medical College, Mahatma Gandhi Memorial Hospital, Warangal, India. The total period of study was 24 months. A total of 50 Male patients with breast diseases were included in the study [13-15]

#### Conclusion

Benign breast diseases are more common male breast lesions, of them gynecomastia is most common. Carcinoma male breast is rare.

- 1 Gynecomastia and other benign male breast diseases are common in young age 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> decades, Carcinoma seen in old age from 5<sup>th</sup> decade.
- 2 Common mode of presentation of Gynecomastia is painless swelling of breast, Carcinoma is lump with advanced features such as ulcer.
- 3 Gynecomastia diagnosed on basis of history, clinical features, careful systemic examination, and baseline hormonal investigations and if required cytological and imaging investigations. Managed based on aetiology. Carcinoma investigated, staged and treated similar to female breast cancer.
- 4 Subcutaneous Mastectomy most commonly performed

surgery in Gynecomastia. MRM in carcinoma. Seroma most common complication.

- 5 FNAC along with USG useful in differentiating benign diseases from malignancy.

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