

Original Research Article

Spectrum of benign breast disease; a critical review of therapy. A single – center experience.

Abstract:

Background: A benign breast condition is one that is not cancer. These conditions often go away on their own or are easily treated. Because a few benign breast conditions can increase your risk of getting cancer in the future, you may need to have follow-up tests or exams with your benign breast disease comprises a large spectrum of disease which ranges from mastalgia, nipple discharge to discrete lump. Medical management with Danazol, bromocriptine, primrose oil and Vitamin E capsules has importance along with surgical intervention in few cases.

Materials & methods: One hundred and one (n=101) patients with mastalgia, nipple discharge and breast lump were treated with medical or surgical management. Post treatment all patients were followed up for symptomatic relief.

Results: Majority of the patients (n=64) presented with mastalgia. Rest of the patients presented with nipple discharge and discrete lump. Most patients (n=75) were treated with Danazol, Linoleic Acid or Vitamin E. 85% patients were satisfied with the treatment administered to them.

Conclusion: Benign breast disease is a diverse spectrum with miscellaneous symptoms. Benign breast diseases are common in female patients and fibroadenoma is the commonest of them all. Triple assessment gave a firm diagnosis and it eliminates unnecessary anxiety in the patients about breast cancer or any other serious illness. Medical management is mainstay with indication of surgery in few cases.

Key words: Benign breast disease, Aberrations of Normal Development and Involution, Fibrocystic disease, Breast abscess, FNAC, Mammogram.

Introduction:

Benign breast diseases are common disorders, up to 30% of women are clinically presented with benign breast diseases and seeking treatment at sometimes in their lives [1-9]. The term benign breast diseases abbreviated as BBD encompasses a heterogeneous clinical and pathological condition which ranges from inflammatory condition to benign neoplastic conditions [2-14]. A comprehensive classification which puts all the processes of physiological changes, growth, development and involution into a single frame work termed as ANDI (Aberrations of Normal Development and Involution) [15].

Chart 1: Early and late reproductive phases

| | Normal | Disorder | Disease |
|--------------------------------------|-------------------------------------|-------------------------|--------------------------|
| Early reproductive years (15-25 yrs) | Lobular development | Fibroadenoma | Giant Fibroadenoma |
| | Stromal development | Adolescent hypertrophy | Giantmastia |
| | Nipple eversion | Nipple inversion | Subareolar abscess |
| | | | |
| Late reproductive year (26-35 yrs) | Cyclical changes of menstruation | Cyclic mastalgia | Incapacitatory mastalgia |
| | NA | Nodularity | NA |
| | Epithelial hyperplasia of pregnancy | Bloody nipple discharge | NA |

Clinical presentations include cyclic or noncyclic mastalgias, nipple discharge, and discrete lump or diffuse lumpiness. 90% Patient may present with one or more symptoms. Breast lump in premenopausal women are benign and usually represents with fibroadenoma in early reproductive period. In middle reproductive period fibrosis, hyperplasia and cyst are more likely. In later reproductive period hyperplasia, cyst and carcinoma in situ are more common. Multipapilloma, sclerosing adenosis and radial scar are other clinical presentations of breast lump. Spontaneous, serous or bloody, unilateral single duct discharges are considered pathological or non-pathological. It needs radiological evaluation. Etiology of mastalgia remains unproven. Role of caffeine, iodine deficiency, and alteration in fatty acid levels in the breast, fat intake in diet and psychological factors in the etiology of breast pain has been suggested [16-23].

Medical management of BBD is mainstay of treatment. Danazol, bromocriptine and tamoxifen has been proven to be effective. Linoleic acid in the form of evening primrose oil has been found to be effective. In randomized trials Vitamin E tablets being widely used and found to be ineffective (Reference). Surgical management in discrete breast lump is found to be satisfying in subset of patients of fibroadenoma, multiple papilloma, sclerosis adenosis and fibrocystic disease. This study was conducted at a tertiary cancer centre. Patients with BBD were followed up for a period of 6 months with surgical and non surgical treatment. Results were interpreted in terms of patient satisfaction and quality of life.

Methods:

| | |
|------------------------|--|
| <u>Study design</u> | : Observational study |
| <u>Sample Size</u> | : 101 patients |
| <u>Study Duration</u> | : 6 months (From June 2020 to December 2020) |
| <u>Sponsor</u> | : No funding to conduct this study |
| <u>Mode of contact</u> | : Telephonic Follow ups done |

Inclusion Criteria:-

- Women of age groups 16-55 years.
- Lactating mothers.
- Willingness to sign the informed consent form.
- Willingness to turn up for routine follow ups.

Exclusion Criteria:-

- Histopathologically proven cases of neoplastic lesions.
- Lost to follow ups.
- Not willing to sign informed consent form.

One hundred and one patients (n=101) clinically presented with mastalgia, breast lumps and nipple discharge visited OPD of tertiary cancer care centre between June 2020 to December 2020. Histopathologically confirmed neoplastic lesions were excluded from this study. Biopsy proven fibroadenoma and phyllodes tumor cases were also excluded from this study. All patients undergone USG and breast bilateral mammography (B/L MMG). Majority of medical management in the form of Danazol or Vitamin E/ Linoleic acid for at least 2 months or maximum 6 months. Few patients underwent surgery in the form of lumpectomy or microdochectomy. Patients post treatment were on regular follow ups.

Result:

Table : 1 Data interpretation of the treatment result was done in the form of symptoms relive and patient satisfaction.

| Sr. No. | Clinical presentations | No. of patients = 101 | In percent |
|----------------|-------------------------------|------------------------------|-------------------|
| 1 | Mastalgia | 64 | 64.64 |
| 2 | Nipple Discharge | | |
| a | Serous discharge | 14 | 14.14 |
| b | Greenish discharge | 5 | 5.05 |
| c | Milky discharge | 6 | 6.06 |
| d | Bloody discharge | 8 | 8.08 |
| 3 | Breast lump (discrete) | 22 | 22.22 |
| 4 | Menstrual irregularity | 41 | 41.41 |

Table 2 Diagnosis of benign breast disease clinically presented in the OPD at a tertiary cancer centre.

| Sr. No | Diagnosis of BBD | No. of patients |
|---------------|-----------------------------|------------------------|
| 1 | Fibrocystic disease | 21 |
| 2 | Fibroadenosis | 12 |
| 3 | Ductal papilloma | 12 |
| 4 | Ductal ectasia | 11 |
| 5 | Ductal hyperplasia | 6 |
| 6 | Inflammatory breast disease | 5 |
| 7 | Granulomatous mastitis | 4 |

Fig 1: Line of treatment administered to the patients

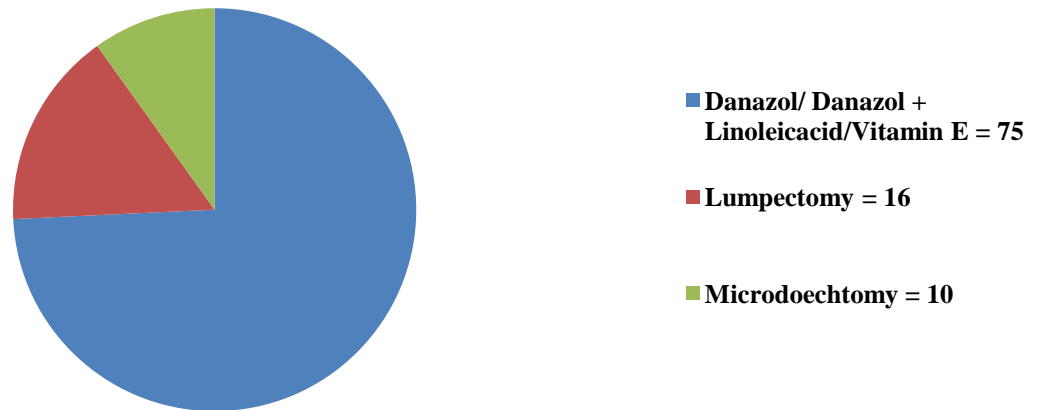


Table 3: Result of treatment captured on the basis of patient satisfaction and relief in symptoms.

| | | |
|----------------------|---|-----|
| | | |
| Patient Satisfaction | Yes | No |
| | 85% | 15% |
| | | |
| Symptoms relieve | Yes | No |
| | Complete response in 55% Partial response in 25% | 20% |

Discussions: In this study majority of the patients presented with cyclic or non-cyclic mastalgia. One third of the patients experienced nipple discharge and few patients presented with breast lump. Menstrual irregularity was almost present in patients with mastalgia. Among all diagnosed benign breast disease fibrocystic disease was in majority followed by ductal papilloma and ductal ectasia. Navneet et al found 40% women with fibroadenoma, 50% patients with nodularity and mastalgia and less than 10% with galacto and nipple discharge [32].

Hatim et al similarly found 77.62% cases of fibroadenoma followed by fibrocystic disease (4.3%) and gynaecomastia [33]. As fibroadenoma was excluded from our study, fibrocystic disease was also in majority in our study too. Many randomized and non-randomized clinical trials have been done regarding the efficacy of Linoleic acid, Danazol, bromocriptine and tamoxifen in the treatment of BBD. Linoleic Acid is found promising in few randomized clinical trials but Vitamin E is considered ineffective in randomized trials [28-31].

As hormonal depletion principle of mastalgia is well effective treatment. Many hormonal treatments i.e. GnRH analogue, Androgens have been tried to treat symptoms associated with Danazol, Linoleic acid or Vitamin E. Lumpectomy and microdochectomy is the main surgical modality being used in minority of the patients with mixed results.

In our study 75% of the patients were treated medically with Danazol, linoleic acid or Vitamin E. Rest of the patients were treated surgically. Majority of the patients were satisfied by their treatment with 55% having complete symptomatic relief.

Finally we concluded that benign breast disease being a wide spectrum of disorder is successfully treated by medicine in majority of the cases followed by surgery in few cases.

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