



MASTALGIA IN ADULT WOMEN – OUR EXPERIENCE.

Radiology

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ABSTRACT

Mastalgia a term used for breast pain is a very common complaint of female patients coming to the outpatient department. The patient is seriously concerned about this because she wants to know if this is not malignancy. In this study a total of seventy cases were studied who visited OPD for pain in the breast. Most of the patients were between the age group of 30 to 50 years. Majority had cyclical mastalgia while others had non cyclical mastalgia. Pain was ranging from mild to severe with majority having moderate intensity of pain. Majority patients who were overweight were complaining of cyclical mastalgia. Obesity, stressful life and lactation frequency were related to mastalgia. Reassurance, NSAIDs and supportive brassiere are important measures for management.

KEYWORDS

Mastalgia, NSAIDs, Cyclical mastalgia, Non cyclical mastalgia, Breast pain

INTRODUCTION:

Mastalgia is the term used for pain which arises from breast tissue and is a benign breast disease (1,2). Fear of malignancy in patient's mind brings many patients to outpatient department and mastalgia remains a common symptom in patients who attend breast clinic (3). More than 50% of population in the reproductive age attend hospital with breast pain (4,5). The major concern for the patient is fear of cancer and it causes anxiety that disturbs the life style (6). It is important to rule out malignancy. Mastalgia can be associated with nodularity and tenderness. Nodularity and mastalgia may be found in normal women (7,8). Some believe that exercise/ physical activity affect the intensity of breast pain and it reduces pain because exercise lowers serum estradiol (9,10). Mastalgia may be constant or occur occasionally.

Cyclical Mastalgia:

- Usual age is 30-50 years
- Occurs 1-2 weeks prior to menses
- Related to menstrual cycles and changing hormone levels
- Usually diffuse and bilateral, dull ache, can be severe
- Relieves with onset of menses
- Spontaneous resolution may occur in cases of cyclical mastalgia in about 20% and persists in 65% after treatment (8)
- Thought to be due to hormonal stimulation of breast especially at the end of luteal phase as it can resolve in pregnancy or menopause (11).
- Can be lifelong in some patients

Noncyclical myalgia

- Older patients
- Not related to menstrual cycles, can be described as unilateral, localized and sharp in breast (12)
- Often perimenopausal
- Can be due to cysts, periductal mastitis, stretching of cooper's ligaments, traumatic fat necrosis, Mondor's disease, diabetic mastopathy or malignancy (7,11)
- May resolve without treatment

Non breast pain

It may mimic mastalgia which may be due to costochondritis (Teit's disease), referred nerve root pain (cervical spondylitis, Herpes zoster). In men breast pain is caused by gynaeomastia due to increased breast glandular tissue caused by imbalance of estrogen and testosterone. This may be unilateral or bilateral In transgender women, hormone therapy may cause breast pain.

METHOD:

This study was conducted in 70 women of reproductive age group who were coming to outpatient department during the period January,2020 to June,2021. The patients below 18 years and above 60 years age, patients with clinically palpable breast lump, pregnant, previous h/o breast surgery, lactating, any lesion on breast and those using psychotic

drugs were not included in the study. The detailed history regarding duration of onset of symptoms, relation of pain with menses, severity of pain, life style as regards stress, consumption of coffee, history of trauma and physical activity was taken. After taking consent and in the presence of a female attendant, thorough physical examination was done for any obvious lesion, scar and disease. It was also assessed whether the patient is obese/ overweight as per standard height chart. All the patients were subjected to ultrasonographic examination in the department of radiology. Ultrasonographic findings were noted as regards texture, density of breast tissue, any lump not detected clinically, any duct ectasia, cyst or nodularity.

RESULTS:

In this study, a total of 70 patients were seen in the outpatient department during the period January,2020 to June,2021. These patients had come with the complaint of breast pain. Majority of the patients had moderate intensity of pain (55) while 13 had mild pain (fig 1). Only two patients reported severe pain. Amongst these, 43 had cyclical mastalgia while 27 had noncyclical mastalgia (fig 2). Maximum number of patients belonged to the age groups of 31-40 years and 41-50 years numbering 24 and 31 respectively. The youngest patient was of 22 years of age and the eldest was of 60 years of age (fig 3). Cyclical mastalgia patients were of younger age group while non-cyclical mastalgia was more prevalent in older age patients (fig 4). Many patients with mastalgia were obese or overweight. Premenopausal patients numbered 56 while 14 patients were post-menopausal (fig 5). 35 patients had breast fed their babies more than three times while 32 had breast fed for two or less number of times (fig 6). Seven patients were unmarried. None of the patient was smoker. Much coffee consumption was also not reported by the patients. The sonographic picture of most of the breast showed a normal breast while two had small simple cysts and one case was of a small fibroadenoma (fig 7)

Fig 1.

Pain intensity	No of patients
i) Mild	13
ii) Moderate	55
iii) Severe	02
Total	70

Fig 2.

(Type of mastalgia)	no of patients
Cyclical mastalgia	29 pts
Noncyclical mastalgia	41 pts
Total	70

Fig 3.

(Age distribution):	no of pts
Age in years	

21- 30	09
31-40	24
41- 50	31
51-60	06
Total	70

Fig 4.

(Type and age relationship):

Age in years	Cyclical mastalgia	Noncyclical mastalgia
21-30	06 pts	03 pts
31-40	13 pts	11 pts
41-50	10 pts	21 pts
51-60	00 pts	06 pts
Total	29 pts	41 pts

Fig 5.

(Menstrual status):

Premenopausal patients	56 pts
Postmenopausal patients	14 pts
Total	70 pts

Fig 6.

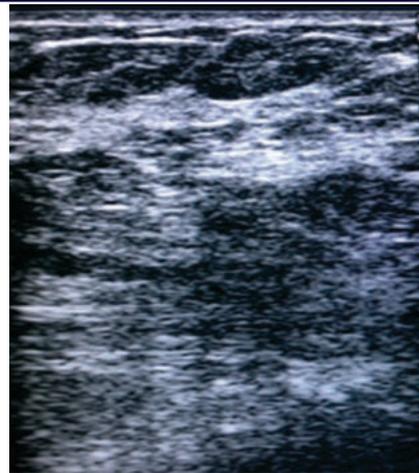
(lactational status):

No of Breastfed infants	pts
0	07 pts
1	06 pts
2	14 pts
3 and more	43 pts
Total	70 pts

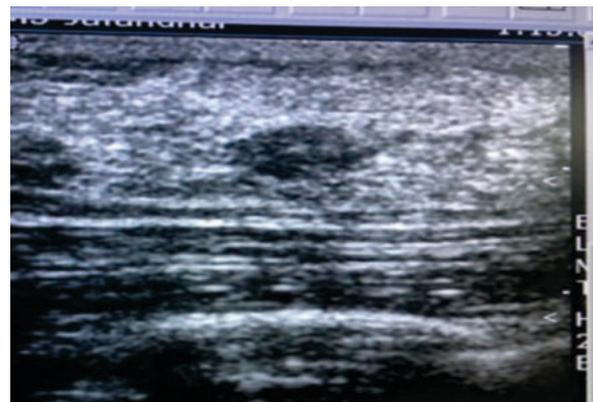
Fig 7.

(US finding)

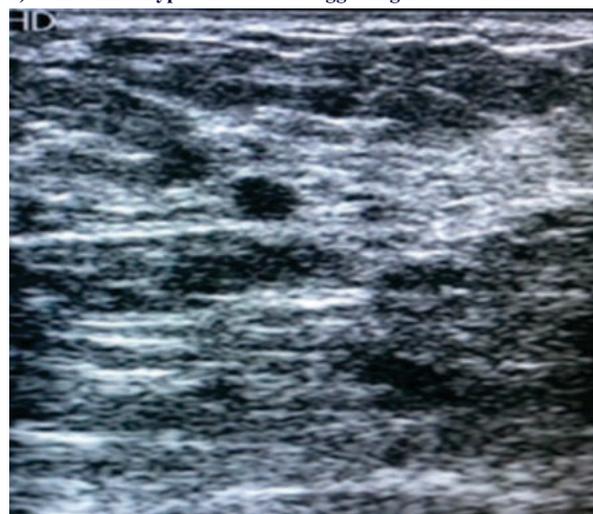
Fibroadenoma breast	01 pt
Fibroadenosis breast	08 pts
Simple cyst breast	02 pts
Normal breast tissue	59 pts



c) Dense fibroglandular tissue (fibroadenosis)



a) Well defined hypochoic lesion suggesting fibroadenoma



b) Cystic lesion suggesting simple breast cyst

DISCUSSION:

This study was conducted to study likely possible factors associated with breast pain (mastalgia). In our study the majority of patients (78.5%) with mastalgia were of age between 31 - 50 years. In a study Johnson et al (13), reported that age of patients who had breast pain was 35-55 years. Many studies have shown a relationship between mastalgia and psychological stress (1,14,15). Relationship between mastalgia and higher stress was reported in study by Alder et al (16). The studies have reported a relationship between caffeine consumption and smoking as controversial (17,18). In the present study none of the patient was smoker. Physical activity may affect breast pain intensity (9) and some believe that breast pain is caused by impaired fat metabolism (19). Fentiman IS reported that cyclic pain of breast can be reduced by exercise as it lowers serum estradiol (10). In the study, the patients who had breast fed infants for three or more times constituted more than 50% of patients. This shows an association of breast pain (mastalgia) and increased no of pregnancies and hence increased exposure to high estrogen and prolactin levels. This also leads to changes in the breast ductal system and this may lead to breast pain (20). Estrogen hormone may be the cause of the cyclic nature of breast pain, presence of symptoms like swelling, tenderness and nodularity and cessation of pain in postmenopausal women. In the study it was found that non- cyclical mastalgia was more common in higher age group (more than 40 years of age) and was unilateral.

CONCLUSION:

Mastalgia is a common complaint in women and is more common in women who have breast fed infants for three or more periods of lactation. Cyclic mastalgia occurs in younger age group while non cyclic mastalgia seen more often after 40 years of age. Commonly no gross ultrasonographic abnormality is found in mastalgia patients.

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