

# Dealing of 100 Cases of Mastalgia at Sadar Hospital, Laxmipur

Sharmin Jahan<sup>1</sup>, Most. Nasrin jahan<sup>2</sup>

**ABSTRACT:**

**Introduction:** Introduction: Mastalgia is a common and painful experience among women, adversely affecting daily life by reducing the quality of life and yielding to anxiety. The purpose of the present study was to find out the related factor that cause mastalgia and its relation with benign or malignant breast disease.

**Methods:** This study was carried out in OPD (outpatient department) of surgery at Sadar Hospital, Laxmipur from January 2018 to June 2019. About 100 cases were selected from OPD of surgery with pain in the breast. It was prospective type of observational study. All patient enrolled into the study underwent a standard survey via Questionnaire. Physical examination was carried out in all patients. Ultrasonography and mammography were done when necessary to exclude benign disease or occult malignancy. After taking informed consent about to the response of treatment of patient and follow up of patients were scheduled at 4, 8 and 16 weeks. Mastalgia severity and effect on daily life, sleep patterns, and sexuality were evaluated with the aid of a visual analogue scale graded from 0 to 10.

**Results:** Age distribution of the study was 30 -50 years, mean 40 years. We had found some related factor that cause increase breast pain like age of patient, emotional stress level, consumption of caffeine/tea, smoking, number of pregnancy and breast feeding, weight of patient and the presence of any recent trauma to the breast, pre-menopausal syndrome, benign breast disease like fibrocystic disease, cyst, fibroadenoma etc. and its relationship to the menstrual cycle or not. In this study about 70% of the patients treated with reassurance, wearing appropriate bra and daily life style changes like weight loss, stop smoking and use mild analgesia like (acetaminophen).

**Conclusion:** Most of the mastalgia patient can be managed by reassurance and good bra support without further intervention.

**Key word:** Mastalgia; breast pain.

(The Planet 2021; 5(1):15-22)

**INTRODUCTION:**

Mastalgia means pain in the breast tissue. It is one of the most common breast symptoms causing women to consult physicians. It may affect up to 70% of women in their lifetime

[2]. The high level of public awareness about breast cancer made the concern about mastalgia. Mastalgia is most common in women aged 30–50 years [2, 4]. It can be categorized into two types Cyclic and Non-

1. Assistant professor Mugda Medical College and Hospital
2. Assistant professor, Pharmacology, SBMC, Barishal

cyclic mastalgia (chest wall pain, non-chest wall pain). Cyclic mastalgia is classically related to menstrual cycle. Research criteria for the diagnosis of CM are (1) pain severity greater than 4.0 cm measured on a 10.0-cm visual analog scale and (2) pain duration of at least 7 days per month [3]. It ipsilateral, diffuse, poorly localized, and generally described as heaviness or soreness that often radiates to the axillae and arms [2]. It occurs most often during the luteal phase as a result of increased water content in breast stroma caused by increasing hormone levels [2, 6]. Cyclic breast pain occurs more often in younger women, mostly resolves spontaneously, and should be separated from premenopausal syndrome [2,3]. Most of them describe premenstrual mild cyclic mastalgia (CM) that lasts for 1 to 4 days as “normal” [3]. Recent population based and breast clinic-based, 11 studies suggest that up to 70% of women under 55 experience breast pain. Although 45% of them report minimal to mild symptoms, about 25% report moderate-to-severe mastalgia lasting more than 5 days [3]. Noncyclic pain is not related to the menstrual cycle. It usually presents in unilaterally. Pain described as a sharp, burning pain that appears to be localized in the breast [2, 7]. Noncyclic mastalgias most common in women of 40–50 years of age [3]. True breast pain should also be distinguished from chest wall pain or non-chest wall pain. Chest wall pain may be caused by such as Tietze’s syndrome (costochondritis), radicular pain from cervical arthritis. It may be localized or diffuse lateral chest wall pain. On the other hand, gallbladder disease, and heart disease are examples for non-chest wall pain [2].

## **METHODS & MATERIAL:**

This study was carried out in OPD (outpatient department) of surgery at Sadar Hospital, Laxmipur from January 2018 to June 2019. About 100 cases were selected from OPD of surgery with pain in the breast. It was prospective type of observational study.

## **SELECTION CRITERIA:**

30 to 50 years of women with breast pain.

## **EXCLUSION CRITERIA:**

Malignancy, post-menopausal women, post-surgical related breast pain, male breast pain and pain related to medication or hormone therapy (phenothizine, hormonotherapy, spiro lactone, anticonvulsant, lithium), nipple discharge, breast abscess, fibrocystic disease, macromastia, pregnancy and lactation, mastalgia not related to breast. All patient enrolled into the study underwent a standard survey via Questionnaire about age, emotional stress level, consumption of caffeine/tea and nicotine/smoking, number of pregnancy and breast feeding, oral contraceptive pill, weight of patient and the presence of any recent trauma to the breast, type of pain, location and its relationship to the menstrual cycle or not. Physical examination was carried out in all patients. Ultrasonography and mammography were done when necessary to exclude benign disease or occult malignancy. USG for below 40 years of patient and MMG for above 40 years were done. After taking informed consent about to the response of treatment of patient and follow up of patients were

scheduled at 4, 8 and 16 weeks. The pain scale is also helpful in assessing treatment response in mastalgia. In our study, the breast pain score was estimated by a visual analogue scale. Mastalgia severity and effect on daily life, sleep patterns, and sexuality were evaluated with the aid of a visual analogue scale graded from 0 to 10. The intensity of pain was determined to be very severe at 10 and none at 0.

Scored 0–2: not affected

Scored 3–5: slightly affected (mild)

Scored 6–8: affected (moderate)

Scored 9–10: significantly affected (severe)

## RESULTS:

In this study patients were 30- 50 years of women .55% above 40 years &45% below 40 years, tea consumption 90%,smoking and other uses of nicotine20%,stressful condition 50%, OCP 30% and other methods of contraception 70%,number of pregnancy >3 80%,lactation 65%,BMI >30 were 60%,premenopausal syndrome 20%,the effect of mastalgia on daily activity75%,on sleep 20% and on sexual life 5%, wearing no bra 60% and wearing ill-fitting bra 40%. According to type of breast pain, 70% had cyclic mastalgia & 30% had non-cyclic mastalgia, diffuse pain in 65% of patient and localized pain of 35% of patient. Bilateral pain was present 70% of the patient and 30% of the patient had unilateral pain. Visual analogue scale showed score 3-5 were 30%, score 6-8 were 65% and score 9-10 were 5%.USG was carried out on 35 patients of breast pain. When USG were

evaluated, incidences of fibrocystic disease 8% and traumatic fat necrosis 5% Mammographic screening was carried out on 5% patients of breast pain. According to the BI-RADS categories, BI-RADS 2 was 4% of patient.Those patients had mild to moderate pain and related to cyclical mastalgia we preferred first line treatment including reassurance, supportive bra, life style changes like stop smoking, weight reduction and used mild analgesic. If first line treatment not responded then we preferred second line treatment including topical NSAID, Evening primrose oil and vit-E. When patient had severe pain, we preferred third line endocrine treatment.

**Table- 1. Related factor to breast pain**

Factors	Number of patients	%
Age of patient		
30-40 years	45	45%
41-50 years	55	55%
Smoking/other nicotine	20	20%
Coffee/tea consumption	0 90	0% 90%
Stressful condition	50	50%
Oral contraceptive pill	30 70	30% 70%

Other methods(DMPA,IUD)		
Number of pregnancy	>3= 80 <3=20	80% 20%
Lactation	>3=65 <3=20	65% 20%
No lactation	15	15%
BMI	>30 =70 <30=30	70% 30%
Premenopausal syndrome	20	20%
The effect of mastalgia on daily life	75	75%
The effect of mastalgia on sleep	20	20%
The effect of mastalgia on sexual life	5	5%

**Table- 2. Distribution of patient in the mastalgia group according to their types of pain**

Breast pain	Characteristics	%

Relation with menstruation	Cyclic Non-cyclic	70% 30%
Radiation	Diffuse localized	65% 35%
laterality	Bilateral Unilateral	70% 30%

**Table-3. Visual analogue scale**

Visual analogue scale	N=	%
	100	
Score 3-5	30	30%
Score 6-8	65	65%
Score 9-10	5	5%

**Table- 4. Imaging findings**

Imaging	N=100	%
No imaging	60	60%
Ultrasonography	35	35%
Normal	20	20%
Simple cyst	1	1%

Fibrocystic changes	8	8%
fibroadenoma	1	1%
Fatty tissue necrosis	5	5%
Mammography	5	5%
BI-RADS-0	0	0
BI-RADS-1	1	1%
BI-RADS-2	4	4%
BI-RADS-3	0	0

Acetaminophen		
Second line Topical NSAID Evening primrose oil Vitamin-E	Moderate pain not response to first line treatment	25%
Third line Danazol Bromocriptine tamoxifen	Severe pain not Response to second line treatment	5%

**Table-5. Treatment of breast pain**

TREATMENT	BREAST PAIN	PERCENTAGE OF PATIENT IMPROVED
first line reassurance Supportive bra Life style changes - weight reduction Cessation of smoking or other nicotine	Mild to moderate	70%

### DISCUSSION:

Mastalgia is the commonest breast symptom present to general physician and Surgeon or Gynecologists. In our study 100 cases of patient (women) were selected complaining of breast pain were between 30 and 50 years. The mean age of the patient was 40 years. We had found number of related factors that increase breast pain such as smoking and other local made nicotine stuff (gull), depression or anxiety, not wearing appropriate size of bra, obesity, premenopausal syndrome, direct trauma to breast, more pregnancy and lactation and

some benign breast disease like fibrocystic changes of breast.

In our study showed smoking and other nicotine related to mastalgia. The relationship of increased smoking (> 10 cigarettes/day) and caffeine (methylxanthin) containing diet such as coffee, tea, chocolate, cola etc. were correlated with mastalgia<sup>[2,8,3]</sup>. The number of patients having a 'stressful lifestyle' was significantly higher. Here are numerous studies demonstrating a relationship between mastalgia and psychological stress<sup>[15-17]</sup>. Not wearing appropriate size bra one of the cause for breast pain. Wearing an external breast support reduced absolute vertical movement and maximum downward deceleration force on the breast. In a non-randomized comparative single center trial ( $n = 200$ ) of Danazol versus sports bras, 85% of women experienced relief from mastalgia by wearing a sports bra for 12 weeks compared to 58% in the Danazol group<sup>[5]</sup>. There were no side-effects from wearing a bra, whereas 42% of women experienced side-effects with Danazol. Obesity also responsible for breast pain, those BMI>30<sup>[3]</sup>. Number of women had premenstrual syndrome related to mastalgia. Most of agree that cyclical mastalgia and tenderness of breast were part of pre-menopausal syndrome<sup>[3]</sup>. We had found no relation OCP with breast pain. Because we advised the patient to continue OCP during mastalgia treatment. Fibrocystic changes and mastalgia are two different things although they commonly occurred in together<sup>[3]</sup>. Mastalgia occurred due to fat tissue necrosis or a strain in the Cooper

ligaments as results of trauma to the breast<sup>[2]</sup>. In our study, although the presence of a recent history of direct trauma to the breast showed mastalgia. The women had history of breast feeding three or more infant was increased in the mastalgia. These result height light increased number lactation related to increased number of pregnancy with increased exposure to effect of high estrogen and prolactin level. Increased number of lactation may result anatomical changes in the breast tissue especially in ductal system such as duct ectasia which may lead to mastalgia. In our study the rates of cyclic and noncyclic mastalgia were found to be 70% and 30%. Some studies showed, 60.0% of women suffered from cyclical mastalgia and in most of them the pain was appeared before menstrual period [6, 8]. Most of the patient had cyclical mastalgia related to menstrual cycle and non-cyclic mastalgia related to premenstrual syndrome, breast trauma and benign breast disease<sup>[8]</sup>. Most of USG were normal in our study. The rates of simple cysts and fibro adenomas had seen higher in the localized mastalgia .On the other hand, the incidence of fibrocystic disease detected by US and Mammography was significantly higher in patients with diffuse breast pain. Fibrocystic disease is a generalized involvement of the breast parenchyma, that it leads to diffuse breast pain is not unexpected.<sup>[2, 6]</sup> Breast pain usually present as diffuse or localized. Cyclic mastalgia patient and most of fibrocystic disease patient had diffuse pain. Non-cyclic mastalgia had localized pain related to benign breast disease like fibroadenoma and simple cyst. Diffuse pain usually bilateral and cyclic. Non-cyclic pain

was unilateral. Patient came to our OPD due to pain which was responsible for difficulty of daily work, disturbances of sleep and sexual activity [8]. We assessed the breast pain by VAS. Most of the patient had mild to moderate pain. Only 5% cases had severe pain [6]. Regular follow up 4, 8, and 16 weekly the patient and assessed their pain with VAS. In this study about 70% of the patients treated with reassurance, wearing appropriate bra and daily life style changes like weight loss, stop smoking and use mild analgesia like (acetaminophen). Their pain was improved within 4 to 8 weeks. No need further treatment. A cohort study ( $n = 121$ ) demonstrated that 70% of women with mastalgia were managed effectively by providing reassurance without needing further intervention [5]. Reassurance is one of the most important treatment part of mastalgia. Those patients not improved by first line treatment, we added topical NSAID, evening prim rose oil 1000 to 2000 daily and vit-E400 to 800 IU daily for 3 to 6 months [8]. As a first-step approach, agents such as acetaminophen, NSAIDs and topical diclofenac was preferred, which were easier to obtain with better patient compliance, and are effective. In another study, recommend that topical non-steroidal anti-inflammatory gel to be considered to pain control for localized treatment of mastalgia [9] and found topical non-steroidal anti-inflammatory drugs (NSAIDs) to be a safe, effective, rapid and acceptable mode of treatment for CM and non-CM in addition to being superior to EPO. The combination of EPO and vit- E for pain control in women with cyclic mastalgia showed a trend towards a reduction of pain [3]. During follow

up patient till complained pain and not improved by previous treatment then advised for endocrine therapy like Danazol, Bromocriptine and Tamoxifen. For severe persistent cases, endocrine agents such as Danazol may be considered as first-line drug treatment after conservative management has failed. Tamoxifen and Bromocriptine appear less effective, but can be considered where Danazol is ineffective or contraindicated [2, 5]. Danazol is currently the only drug licensed in the UK for the treatment of mastalgia. RCTs report up to 80% improvement in mastalgia symptom reported as early as 4 weeks after commencing treatment. The side-effects of Danazol are androgenic, including menstrual disruption (menorrhagia or scanty menses), acne, hirsutism, vaginal dryness and voice changes (hoarseness). Potential teratogenic effects may limit its use in women of child-bearing age [3].

## CONCLUSION

Mastalgia is rarely considered as a presenting symptom of breast cancer. However, because of the increased awareness of breast cancer, more women are seeking professional advice than ever before [3]. A stepwise approach should be adopted when managing idiopathic mastalgia. Despite the high probability of the coexistence of a malignant breast tumor with noncyclic breast pain, it should always be kept in mind that, although rare, cyclical mastalgia can also be associated with malignancy [1, 10-13].

## REFERENCES:

1. Nazeer, N. Thakur, N.Wani, R.et al.(2016).Evening Primrose Oil and Vitamin E in Mastalgia Which Is Better ?.JMSCR.04(11),pp.13999-14003.
2. Ibrahim, A. (2016).Factor Effecting Mastalgia. Breast care,11, pp.188-193.
3. Murshid ,K.(2011). A Review of Mastalgia in Patients with Fibrocystic Breast Changes and the Non- Surgical Treatment Options. Journal of Taibah University Medical Sciences,6(1),pp.1-18.
4. Fitzpatrick, LA. Pruthi, S. Smith, RL. (2004) Evaluation andmanagement of breast pain. Mayo ClinProc, 79 ,pp.353-372
5. Barnes N, Hafiz S, Kirwan C. et al.(2018). Clinical management of idiopathic mastalgia: a systematic review.J PRIM HEALTH CARE,10(4),pp.312-323.
6. Akin,B. Kocoglu, D .Kursun,S.et al.(2017). Mastalgia and associated factors : a cross sectional study. AGRI , 29 (3), pp.100-108.
7. Ader ,DN. Adera ,T. South-Paul, J .et al.(2001).Cyclical mastalgia: Prevalence and associated health and behavioral factors. J Psychosom ObstetGynaecol , 22,pp. 71-76.
8. Shobeiri1, F. Oshvandi1, K. Nazari2, M. (2016). Cyclical mastalgia: Prevalence and associated determinants in Hamadan City, Iran. Asian Pacific Journal of Tropical Biomedicine,6(3), pp.275-278.
9. Rosolowich V, Saettler E, Szuck B.et al.(2006).Society of Obstetricians and Gynecologists of Canada (SOGC).Mastalgia. J ObstetGynaecol Can,28(1) , pp.49-71.23
10. Qureshi, S. Sultan ,N.(2005).Topical nonsteroidal anti-inflammatory drugs versus oil of evening primrose in the treatment of mastalgia. Surgeon,3(1),pp. 7-10
11. Nerkar , H. Tejwani, PL. Srivastava , A. et al.(2011). Centchroman regresses mastalgia: A randomized comparison with danazol. Indian J Surg , 73,pp.199-205.
12. Celikyay, F. Voyvoda, N. Yuksekkaya, R. et al.(2012) Breast ultrasound findings in patients with mastalgia under the age of forty. J Breast Health , 8,pp. 19-22.
13. Murshid,KR.(2011).A review of mastalgia in patients with fibrocystic breast changes and the non-surgical treatment options.J TaibahUniv Med Sci, 6(1), pp.1-18.
14. Nahid,S. Olfati, F. .Parsay, S.(2009). Therapeutic effects of vitamin E on cyclic mastalgia. Breast J,15(5),pp.510-14.
15. 65.Blamey ,RW.Khan, HN.Rampaul, R.(2004). Local anaesthetic and steroid combined injection therapy in the management of non-cyclical mastalgia.j. Breast,13,pp.129-32.
16. Öztürk, AB.Özenli, Y.Özturk, SB. et al.(2015). The effect of psychoeducation on anxiety and pain in patients with mastalgia. Nord J Psychiatry,69(5),pp.380-5
17. Brown, N. Brasher, A.Scurr, J.(2014). The experience of breast pain (mastalgia) in female runners of the 2012 London Marathon and its effects on exercise behaviour. Br J Sports Med,48,pp.320-5.
18. Hadi,A(2000). Sports brassiere: is it a solution for mastalgia? Breast J, 6(6),pp.407-9.