

Clinical Profile of Cyclical and Noncyclical Mastalgia

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Abstract

Breast pain, also known as mastalgia or mastodynia, is a commonly encountered symptom in clinical practice. It causes significant patient anxiety and was the primary indication for breast-related visits in the hospital. Women often seek medical attention for breast pain due to concerns of breast cancer. Given that breast pain as a sole complaint has low risk of breast cancer. It is not unusual for women to have 2–3 days of mild breast pain premenstrually but 8–30% of women report moderate to severe breast pain with a duration of 5 or more days each month. Mastalgia can be severe enough to interfere with the quality of life. It may be cyclical or non cyclical mastalgia. The etiology of mastalgia is not well understood. Hormonal assays of Estrogen, Progesterone, and Prolactin have shown no abnormalities despite the relationship to the menstrual cycle. Even so, Pregnancy, Lactation, Menopause, Oral contraceptives, and hormone replacement therapy variously affect the course of breast pain. Evening primrose oil, Vitamin E, Danazol, Bromocriptine can be effective in treatment of mastalgia. However the studies are inconclusive about the effective treatment modalities for mastalgia. Nevertheless, reaching definitive diagnosis in patients with breast pain represents a dilemma, as the causes and treatments of breast pain are inadequately defined.

Keywords: Mastalgia; Breast Cancer; Estrogen; Evening Primrose Oil; Vitamin E.

Introduction

Breast pain, also known as mastalgia or mastodynia, is one of the common symptom encountered in clinical practice. It may be cyclical or non cyclical and causes significant patient anxiety and is frequently cited as the primary reason for a woman to seek medical attention. Breast pain was the primary indication for 47% of breast-related visits in a 10-year study of women enrolled in a large health maintenance organization [1]. Women often seek medical attention for breast pain due to concerns of breast cancer [1-3]. Breast pain accounts for 45–70% of breast-related complaints in the primary care setting [4-6]. Given that breast pain as a sole complaint has low risk of breast cancer (0-3%) [7-9] reassurance of nonmalignancy is appropriate [10-11]. Nevertheless, reaching definitive diagnosis in patients with breast pain represents a dilemma, as the causes and treatments of breast pain are inadequately defined

It is not unusual for women to have 2–3 days of mild breast pain premenstrually but 8–30% of women report moderate to severe breast pain with a duration of 5 or more days each month. It can be severe enough to interfere with quality of life. Interestingly, it is less common in Asian cultures, affecting as few as 5%. In western societies mastalgia, or breast pain without underlying pathology, is a common complaint that may affect up to 70% of women in their lifetime. Some breast pain or discomfort is experienced by about 2/3rd of women during the premenstrual phase. More than half of (69%) women reported some discomfort while 36% had consulted health care personnel [12].

Fifteen percent of women who present to a breast clinic will need drug treatment. Breast pain may be bilateral, may be in only one breast or part of one breast, and may radiate to the axilla and down the medial aspect of the upper arm. The etiology of mastalgia

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is not well understood. Hormonal assays of Estrogen, Progesterone, and Prolactin have shown no consistent abnormalities despite the relationship to the menstrual cycle. Even so, Pregnancy, Lactation, Menopause, Oral contraceptives, and hormone replacement therapy variously affect the course of breast pain. Rarely is mastalgia the only symptom of breast cancer.

In a retrospective study of 2332 new patients attending a breast clinic in south wales, only one carcinoma presented with pain alone. However, breast pain has been reported as a presenting symptom of breast cancer in a range of 5-18% of breast cancers.

Evening primrose oil (EPO), Danazol, Bromocriptine can be effective in treatment of mastalgia [13]. There is presently insufficient evidence to recommend the use of EPO in the treatment of breast pain [15]. First choice of treatment for cyclical mastalgia is EPO [15]. A large recent meta-analysis performed by Srivastava and associates reviewing the data from all randomized controlled trials using EPO revealed no significant beneficial effect of EPO over placebo [16]. Overall 92% of patients with cyclical mastalgia and 64% of patients with non-cyclical mastalgia can obtain a clinically useful response using a combination of danazol, bromocriptine or evening primrose oil [17]. Vitamin E should not be considered for the treatment of mastalgia [14]. Abrams reported a favorable response to vitamin E in an uncontrolled study [16]. Tamoxifen 10 mg daily or danazol 200 mg daily should be considered when first-line treatments are ineffective [14]. The therapeutic dose of evening primrose oil is 3 g daily which contains 240 mg of gamma-linolenic acid (1 gm TDS) [18]. Danazol-The current practice in Indian women is to start at 50 mg daily and increase to 50 mg BD if response is not complete [15]. Tamoxifen-A lower dose of 10 mg daily has been shown to be as effective in the treatment of mastalgia with a significantly reduced side effects compared with 20 mg daily [12]. Bromocriptine is started at a dose of 1.25 mg at night, this is increased by 1.25 mg increments over a period of 2 weeks, or longer, if side effects prove to be a problem, until a dose of 2.5 mg twice daily is reached [19].

Aims and Objectives

1. Clinical evaluation of mastalgia
2. Response of drug treatment in mastalgia

Materials and Methods

Study Period: Prospective study from Aug 2010-July 2012

Study Setting: Surgery OPD, and wards kasturba Hospital, Manipal.

Study population: Women of reproductive age group with breast pain as a presenting feature or first symptom.

Inclusion Criteria

All women with pain in the breast

Exclusion Criteria

1. Women with chest wall pain mistaken as breast pain
2. Women diagnosed as carcinoma breast
3. Post menopausal women

History of patients coming to the OPD with breast pain will be noted. Patients will undergo detailed clinical examination. When doubt regarding any lump or carcinoma, they are advised to undergo radiological investigations such as ultrasonogram of breast if age <40 years and mammography if age >40 years. Patients with palpable breast lumps, lump found on ultrasound or mammography shall undergo FNAC. If FNAC report is benign, they are included in the study. If chest wall pathology is responsible for breast pain, they are excluded from the study. Patients are divided into 3 groups.

1. First group will receive evening primrose oil (EPO) for 2 months
2. Second group will receive vitamin E (VIT E) for 2 months
3. Third group include patients who did not receive any drugs.

Response noted using Cardiff Breast pain score after 2, 4 and 6 months and drugs are either continued/changed/surgery done

Cardiff Breast Pain Score (CBS)

CBS 1

An excellent response with no residual pain

CBS 2

A substantial response but with some residual pain, Considered by the patient to be bearable

CBS 3

A poor response with substantial residual pain

CBS 4

No beneficial response at all.

Ultrasound Breast

Eight (8) patients underwent ultrasound examination of breast. Among them, 4 patients were >40 years. Among the patients who underwent ultrasound, cystic lesions were found in 3 patients. Remaining were normal.

FNAC

Among the 12 patients who underwent FNAC, 11 were found to be benign/fibrocystic disease and remaining one was inadequate for opinion.

Surgery

Five patients underwent lumpectomy during this period of follow up. Another 5 patients had underwent lumpectomy previously before being included in the study. 4 patients out of the total 10 patients who underwent lumpectomy were found to have fibroadenoma and the remaining 6 patients had fibrocystic disease.

Diagnosis

Forty one (41) patients of the total 58 patients included in the study were diagnosed to have Cyclical mastalgia. Remaining 17 patients were found to have Non cyclical mastalgia.

Drugs

Patients received Evening primrose, vitamin E, or only observaton/reassurance.

Beginning of Study

Thirty eight (38) patients (65.5%) were started with Evening primrose. 10 patients were started with vitamin E. Remaining 10 patients were managed by reassurance and without drugs. 30 patients of the total 38 patients who received EPO had Cyclical mastalgia and remaining 8 patients had Non cyclical mastalgia

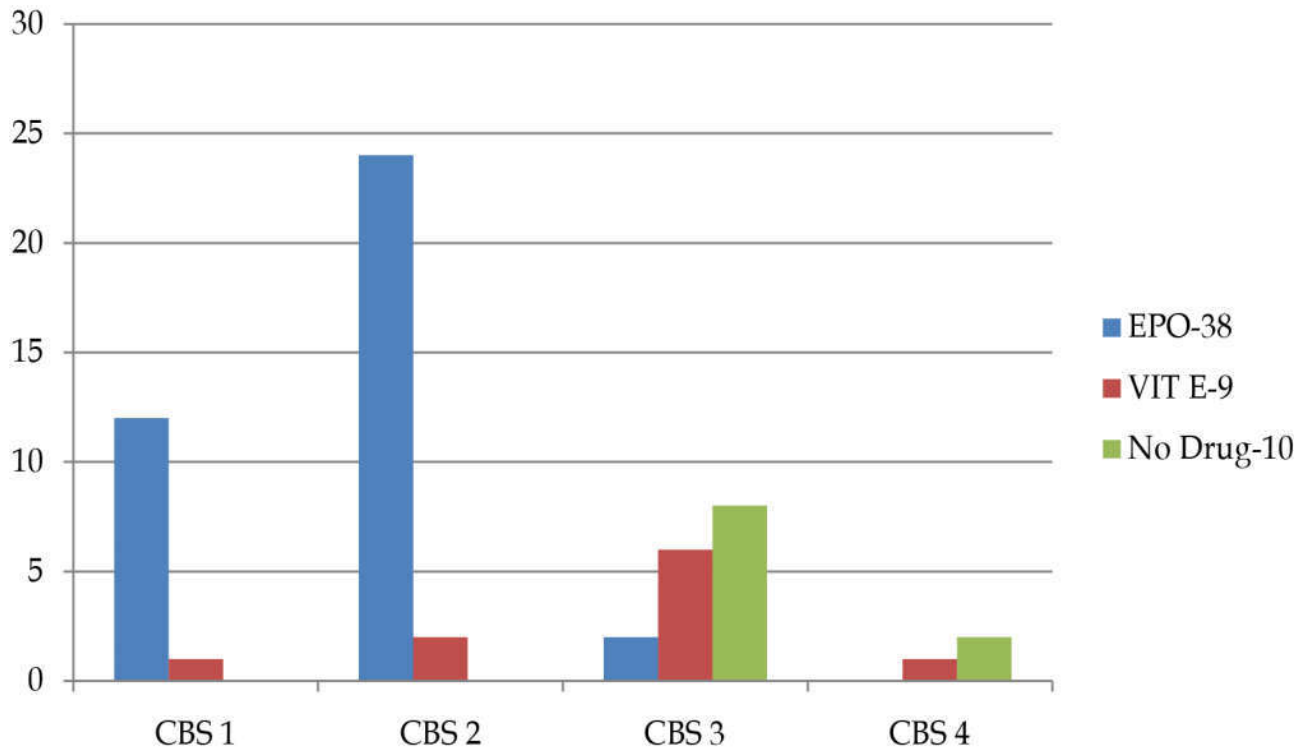
Review at 2 Months

This table 1 below describes the type of response of patients recieving EPO, VIT E and patients managed by reassurance respectively.

Table 1:

	EPO-38	VIT E-10	NO DRUG=10
CBS 1	12	1	0
CBS 2	24	2	0
CBS 3	2	6	8
CBS 4	0	1	2

This below Graph 1 shows that maximum number of patients showed substantial response (CBS 2) to EPO.



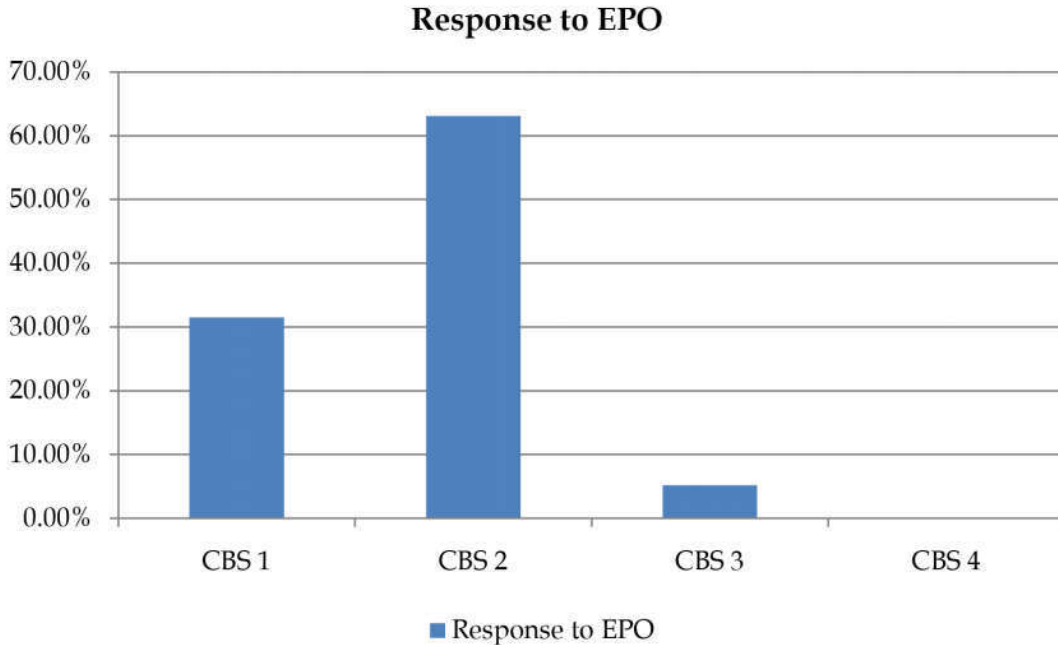
Graph 1:

This bar graph 2 shows the type of response in patient receiving EPO. CBS 1 response is mainly seen in patients with cyclical mastalgia whereas CBS 2 response is seen in both CM and NCM equally as described in the table 2 and bar graph 3 below.

Among the 9 patients who received Vit E, 6 patients had CBS 3 reponse and 1 patient had CBS 2 response.

Patients who were managed only by reassurance

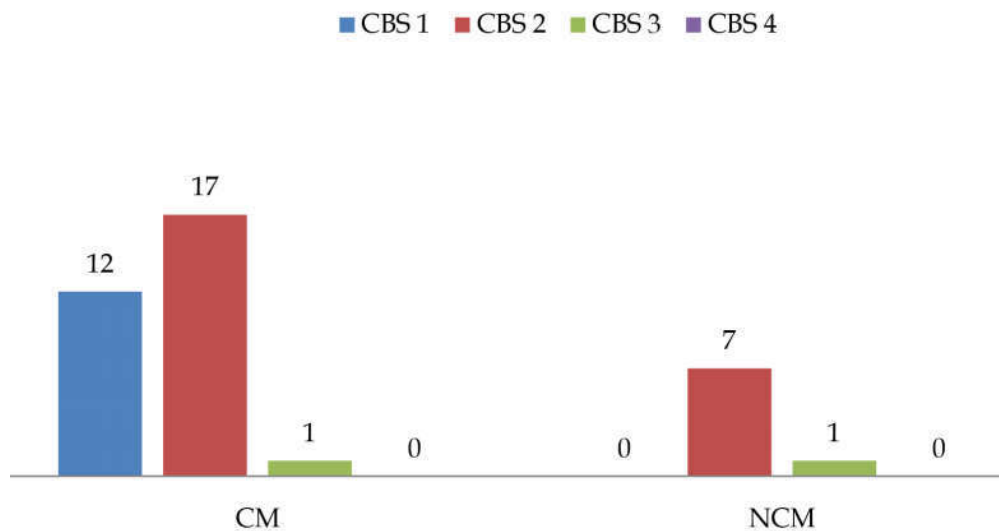
and without any drugs had persistent pain but the intensity had reduced (CBS 3 response). The further analysis of patients who received Vit E and the group that did not receive drugs were stopped in view of less no. of patients in this group and a descriptive analysis of the response of patients receiving EPO was continued.



Graph 2:

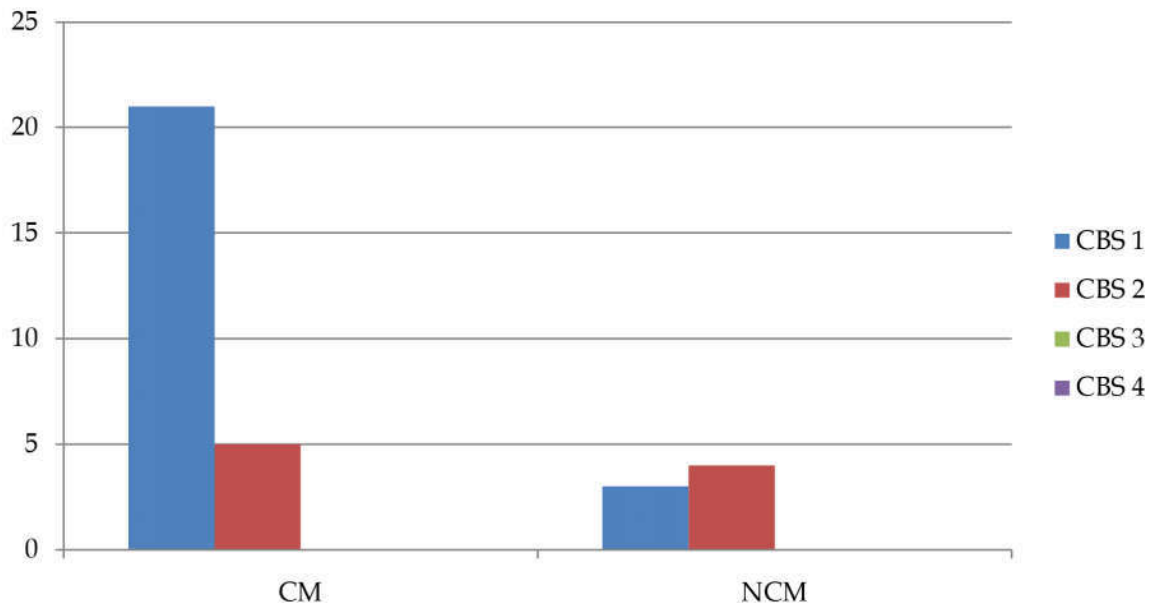
Table 2:

	CM- 30 patients	NCM- 8 patients
CBS 1	12	0
CBS 2	17	7
CBS 3	1	1
CBS 4	0	0



Graph 3:

	CBS 1	CBS 2	CBS 3	CBS 4
CM	21	5	0	0
NCM	3	4	0	0



Graph 4:

Twenty six (26) CM and 7 NCM patients were advised to continue EPO. 4 CM and 1 NCM patient stopped EPO at the end of 2 months. 1 CM and 1 NCM patient was advised to change over to other drugs/surgery at the end of 2 months. 1 patient who underwent surgery had complete subsidal of pain.

Review at 4 months

Thity three (33) patients (CM-26 & NCM-7) of the initial 38 patients received EPO till end of 4 months.

Twenty four (24) patients (CM-21 and NCM-3) showed continued CBS 1 response (72%). 9 patients (CM-5 and NCM-4) showed CBS 2 response(28%).None of them had CBS 3 response at the end of 4 months.

Sixteen (16) patients (CM-15 & NCM-1) were advised to continue EPO for further period of 2 months.

Fifteen (15) patients (CM-10 & NCM-5) were advised to stop the EPO. Another 2 patients (CM-1 & NCM-1) were advised to switch over to other drugs.

Review at 6 months

Review at 6 months showed substantial response of patients to EPO with most of the patients having either CBS 1 or CBS 2 response.

Follow up discontinued.

Side effects

Out of the 48 patients who received drugs, only one patient had experienced side effects of pedal edema with EPO

Conclusion

Most of the patients of mastalgia (58.6%) are in late reproductive age group (26-40 years) and bilateral involvement is common. Our study showed Cyclical and Non Cyclical Mastalgia more common in 3rd decade of life.

Majority of mastalgia patients presented within 6 months of onset of symptoms (48.3%). There was no association between breast feeding and incidence of mastalgia. Cyclical mastalgia was more common as compared to non cyclical mastalgia (70.68%).

Majority of patients had either nodularity/lump on examination (60%). No significant nipple discharge is associated with mastalgia. Majority of the patients in our study received EPO as first line of treatment and significant number of patients showed excellent response (CBS1-72%) to EPO. The response to other drugs/no drugs/surgery could not be commented upon in view of patient number in these group being small.

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