



Effect of Ormeloxifene on Mastalgia and Fibrocystic breast diseases

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Abstract

Introduction: *The majority of breast lesions are benign. Among benign lesions the commonest are fibrocystic disease and mastalgia. Ormeloxifene is a selective estrogen receptor modulator (SERM) with a weak agonist on endometrium and strong antagonist on breast and is used in treatment of benign breast diseases.*

Material and Methods: *156 Patients coming with complains of breast pain and /or nodularity in the age group of 20 to 45 years was included in the study. Visual analogue scale was used for pain assessment and for assessment of nodularity Lucknow Cardiff Scale was used.*

Observation and Result: *At first follow up visit(2nd week) 25% had pain score of 2, 36% with pain score 4 and 37% with pain score 6.but at the end of treatment only 3.8% ,2.5% and 3.8% had score 2,4,and 6 respectively.*

Regarding Nodularity status at initial visit 38 (24.35%) patients had grade 1 and 2 nodularity and 118(75.64%) had grades 3, 4 and 5 nodularity. At the end of follow up study 93% had grade 1 and 2 nodularity and only 10 (6.4%) had grade 3,4 and 5 nodularity.

Conclusion: *Ormeloxifene is an effective drug for treatment of breast pain and nodularity.*

Introduction

Gynaecologists are the first clinicians whom the female patients with breast problems consult. The majority of breast lesions are benign but the main concern to patients is the fear of malignancy, because breast cancer is the most common malignancy in females in western countries and also in metropolitan cities of India.

Since the majority of breast lesions are benign and not even associated with risk of malignant transformation, unnecessary surgical interventions should be avoided and noninvasive treatment modalities encouraged

Of all the benign breast lesions mastalgia and fibrocystic diseases are the commonest and generally affect premenopausal women between 20 to 50 years of age. It may be multifocal and bilateral. Its most common presenting symptoms are breast pain (mastalgia) and tender nodularities in breast

Though the exact pathogenesis is unclear hormonal factors have been implicated like estrogen excess, progesterone deficiency, changes in ratio of these two hormones, alteration of receptor sensitivity, prolactin excess, imbalance of FSH and LH and low androgen

Treatment of mastalgia and fibrocystic breast disorders ranges both from hormonal treatments to lifestyle changes. Treatment given are evening primrose oil, danazol, vitamin E, B6, tamoxifen, bromocriptine and NSAIDS.

A new drug Ormeloxifene was developed by Central Drug and Research Institute Lucknow Uttar Pradesh, India, which was introduced in 1991 and marketed as Saheli in 1992. It is a nonsteroidal selective estrogen receptor modulator (SERM) with a weak agonist on endometrium and strong antagonist on breast ductolobular epithelium and because of its selective antiestrogenic effect it has been used for treatment of mastalgia and other benign breast diseases.

Aims and Objectives

Aim of this study is to see the effect of Ormeloxifene in treatment of Mastalgia and fibrocystic breast disease and hence to avoid unnecessary fear of malignancy and also to avoid unnecessary surgical interventions

Material and Methods

The study was conducted in the Out Patient Department of Obstetrics and Gynaecology, Nalanda Medical College and Hospital from May 2015 to April 2018.

Patients coming with complains of breast pain and /or nodularity in the age group of 20 to 45 years were included in the study

Exclusion criteria was patients on other treatments, pregnant females ,lactating mothers, and those planning pregnancy, undiagnosed menstrual disorders, PCOD, family or past history

of breast cancer, any suspicion of breast cancer and any other systemic disease.

PCOD and endometrial hyperplasia was ruled out by pelvic Ultrasonography.

Visual analogue scale was used for pain assessment. It was analysed with scoring from 1 to 10 over a 10 cm scale.

For assessment of nodularity Lucknow Cardiff Scale was used. A 5 point ordinal scale showing increasing order of nodularity with grade 0 indicating absolutely normal smooth texture of breast and grade 5 indicating maximum nodularity Subjects selected for study were given 30 mg Ormeloxifene tabs one each on alternate days for a total of 3 months

Follow up was done at 2 weeks, 4weeks, 8weeks, 12weeks and 6months. At each visit pain scoring with VAS and clinical examination for nodularity done.

Any side effects were also noted

Observation and Result

Total of 174 patients were included in the study .18 subjects did not comply with follow up and hence not included in the study.

Hence the study was analysed only over 156 subjects.

Considering the pain score, in 30% of the subjects the pain had disappeared in 4 weeks, in nearly 80% by 8 weeks and 90% by the end of 3 months At first follow up visit (2nd week) 25% had pain score of 2. 36% with pain score 4 and 37% with pain score 6. but at the end of treatment only 3.8%, 2.5% and 3.8% had score 2,4, and6 respectively.

Table -1 Pain assessment at follow-up visits

Number of patients (No): Percentage (%)

PAIN SCORE	2 ND WEEK		4 TH WEEK		8 TH WEEK		12 TH WEEK	
	No	%	No	%	No	%	No	%
0	2	1.28	48	30.76	124	79.48	140	89.74
2	40	25.64	56	35.89	13	8.3	6	3.81
4	56	35.89	42	26.92	11	7.05	4	2.5
6	58	37.17	10	6.4	8	5.12	6	3.84
8	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
Total	156	156	156	156	156	156	156	156

Regarding Nodularity status at initial visit 38 (24.35%) patients had grade 1 and 2 nodularity and 118(75.64%) had grades 3, 4 and 5 nodularity.

At the end of follow up study 93% had grade 1 and 2 nodularity and only 10 (6.4%) had grade 3,4 and 5 nodularity.

Table -2.Grades of nodularity

Number of patients (No): Percentage (%)

Visit(WEEKS)	Grade1		Grade2		Grade3		Grade4		Grade5	
	No	%	No	%	No	%	No	%	No	%
0	16	10.2	22	14.10	66	42.30	33	21.15	19	12.17
4	52	33.33	24	15.38	56	35.89	14	8.97	10	6.4
8	76	48.71	33	21.15	37	23.71	6	3.84	4	2.56
12	94	6.02	38	24.35	21	13.46	3	1.92	0	0
6Months	116	74.35	30	19.23	9	5.70	1	0.64	0	0

Discussion

Breast problems are very common in the female patients attending outpatient departments The majority of breast lesions are benign but the main concern to patients is the fear of malignancy, because breast cancer is the most common malignancy in females in western countries and also in metropolitan cities of India In 2004, Smith et al., also in their study on 1171 women attending gynaecology OPD have documented that as high as 69% of them experienced some amount of pre-menstrual breast symptoms

In this study the pain score diminished fast and was relieved by almost 90% at the end of 3 months with 30% subjects getting much faster relief at even 4 weeks. Majority had pain relief by 8 weeks and at 3 months there was 90% relief which remained similar even at 6 months

Chang et al., in their study done in 2006 with a sample size of 998 women with moderate to severe mastalgia it was found that most women had relief with oestrogen receptor modulators

Regarding Nodularity status at initial visit 38 (24.12%) patients had grade 1 and 2 nodularity and 118(75.64%) had grades 3, 4 and 5 nodularity. this improved to 109(69.87%) in grade one and 2 and only 47(30.12%) at the end of 4weeks At the end of follow up study 93% had grade 1 and 2 nodularity and only 10 (6.4%) had grade 3,4 and 5 nodularity

A pilot study was conducted at All India Institute of Medical Sciences, New Delhi, by Dhar and Shrivastava (70%) patients were of mastalgia and

nodularity. They were started of centchroman 30 mg on alternate day for the period of 3 months and were followed up for 6 months. There was good response in mastalgia group with decrease in VAS score from 10 to 3 in 90% of the patients or without nodularity Earlier in 2004, Smith et al., also in their study on 1171 women attending gynaecology OPD have documented that as high as 69% of them experienced some amount of pre-menstrual breast symptoms . . There is a debate on the choice of treatment of fibroadenosis and mastalgia due to varying efficacy and side effects and cost of the drugs; Centchroman is the latest addition. Centchroman (Ormeloxifene- $C_{30}H_{35}NO_3$) is a non-hormonal, non-steroidal oral contraceptive pill. It is a SERM or SERMs, which acts on the estrogen receptor. Centchroman is also used as a contraceptive pill, post coital pill, as treatment for abnormal uterine bleeding anti-osteoporotic and in advanced breast cancer along with other palliative measures.

Centchroman is free from side effects like nausea, vomiting, weight gain and dizziness; it does not delay return of fertility after stoppage and has only one side effect of delayed menses in less than 10% of cases. It has adverse effects on endocrine, haematologic, liver, cardiovascular, central nervous and lipid functions.

Studies have recommended that centchroman is similar to or better than other medications because of its minimal side effects and cost effectiveness

Conclusion

There was considerable improvement in patient symptoms, hence Ormeloxifene is an effective drug for Mastalgia and fibrocystic breast diseases with very few side effects.

Conflict of interest: None declared

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