Section: General Surgery

Original Research Article

TO STUDY THE EFFECT OF ORMELOXIFENE IN THE REGRESSION OF MASTALGIA & FIBROADENOMA

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Abstract

Background: Benign breast disease includes mastalgia, fibroadenoma, fibroadenomatous hyperplasia, fibrocystic disease, mastiti, sclerosing adenosis and breast abscess. Patients with benign breast disease often present with pain and swelling. They frequently visit the clinic for the complaints of pain and nodular swelling. Most of the benign breast disease are treated conservatively with medications and rarely surgery. There is no satisfactory treatment for these benign disease. This is to study the effect of ormeloxifene in the regression of mastalgia & fibroadenoma. Ormeloxifene, also known as centchroman, is one of the selective estrogen receptor modulators, or SERMs, a class of medication which acts on the estrogen receptor. It is best known as a non- hormonal, nonsteroidal oral contraceptive. **Aim:** To study the effect of Ormeloxifene in the regression of mastalgia & fibroadenoma. To study the time taken for the healing of benign breast diseases with the use of Ormeloxifene. **Materials and Methods:** Hundred patients in the department of General Surgery, with complaints of breast pain and lump are selected and randomly divided into two group. One group was treated with Ormeloxifene 30mg twice a wk for 12 wks and the other group with placebo such as vitamin tablets for 12 wks. The effect was assessed with pain scale, breast lump size with Lucknow –Cardiff scale and with Ultrasound breasts. **Results:** The patients who are treated with ormeloxifene for mastalgia and fibroadenoma shows pain relief and reduction in nodularity respectively. 92% of mastalgia patients showed response to ormeloxifene, whereas 80 % of nodularity reduced completely with ormeloxifene at the end of 12 weeks. **Conclusion:** Ormeloxifene also known as centchroman, which is a selective estrogen receptor modulator was found to be effective in treating mastalgia and fibroadenoma.

INTRODUCTION

Most common bening breast disease in young females are Fibroadenoma and mastalgia. 15% palpable breast lump comes as fibroadenoma. Reproductive age group females frequently visit clinic with complaint of pain and lump in the breast. Fibroadenoma presents rarely over the age of 40-45yrs.[2] Mastalgia may be cyclic or non-cyclic, intermittent or constant, localized or diffuse. Different pharmacological agents have been tried in the therapy of mastalgia and fibroadenoma.[3,4,5] Ormeloxifene is a selective oestrogen receptor modulator with oestrogenic action on bones as well as antioestrogenic action on uterus and breast. Hence randomized control study conducted for the females attending Namakkal medical college hospital with c/o pain and lump in the breast. One group treated with Ormeloxifene 30mg twice weekly for 12 weeks, another group with vitamin tablets. Regression of symptoms of mastalgia and fibroadenoma is assessed using visual analog pain score and Lucknow Cardiff scale respectively.

Aim and Objectives

1. To assess the effect of ormeloxifene in the regression of fibroadenoma and mastalgia for those who are willing for the study.
2. To predict the time for the healing of diseases with the use of Ormeloxifene.

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MATERIALS AND METHODS

Type of Study

Prospective Randomized control study conducted in the department of General Surgery at Namakkal medical College hospital.

Method of Study

- 100 patients attending the department of General Surgery both inpatients and outpatients with complaints of breast pain and lump are selected and randomly divided into two group
- One group was treated with Ormeloxifene 30mg twice a week for twelve weeks and the other group was treated with placebo such as vitamin tablets for twelve weeks. The response was assessed with pain scale and breast lump size assessed with Lucknow –Cardiff scale as well as Ultrasound breasts

Inclusion Criteria

- Age group 20-35years
- With mastalgia and breast swelling or nodularity

Exclusion Criteria

- Patients with breast carcinoma
- Patient with uterine hyperplasia
- Lactating mothers
- Pregnancy
- Patients taking oral contraceptive pills

Study group is divided into two groups with 50 numbers in each group Group A: Treated with Ormeloxifene

Group B: Treated with Placebo

After getting consent from the patient group A is treated with ormeloxifene 30mg twice a week for 12 weeks and group B is treated with Placebo(Vitamin Tablets) twice a week for 12 weeks .Both the group Patient's followed for 6 months.

Mastalgia patient's are analysed with visual analog pain scale ranges from 0 to 10

- Scale 0 – No Pain
- Scale 1 –Mild Pain
- Scale 5 –Moderate Pain
- Scale 10 – Severe Pain

Fibroadenoma patient's nodularity was assessed by 6Lucknow Cardiff Scaling and Ultrasonogram. Nodularity scaling ranges from 0 to 4.

- Scale 0 – Extreme extent of normalcy
- Scale 1 –Moderate Nodularity
- Scale 4 – Maximum Nodularity

RESULTS

Table 1: Mean Age of Study

Group	MEAN ± SD
Ormeloxifene	26.3 ± 5.89
Placebo	25.96 ± 5.82

Table 2: Age Category of the study

Age in Years	Ormeloxefine		Placebo	
	No	%	No	%
16-20	11	22%	10	20%
21-25	15	30%	14	28%
26-30	9	18%	12	24%
31-35	15	30%	14	28%

Table 3: Mastalgia in the Study

Group	Mastalgia			
	Positive		Negative	
	No	%	No	%
Ormeloxifene	20	40%	30	60%
Placebo	24	48%	26	52%

Table 4: Fibroadenoma in the Study

Group	Fibroadenoma			
	Positive		Negative	
	No	%	No	%
Ormeloxifene	32	64%	18	36%
Placebo	28	56%	22	44%

Table 5: Pain Relief (VAS) in the Study

Group	Pain Relief (VAS)			
	0	1	5	10
Ormeloxifene	46(92%)	0(0%)	4(8%)	0(0%)
Placebo	26(52%)	2(4%)	18(36%)	4(8%)

Table 6: Association of Ormeloxifene with VAS in the study

Ormeloxifene	VAS				Total
	0	1	5	10	

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Not Given	26	2	18	4	50
Given	46	0	4	0	50
Total	72	2	22	4	100
Chi - Square Tests					
	Value	**df**	**Asymp.Sig**	**(2-sided)**	
Pearson Chi Square	20.465*	3	0		
Likelihood Ratio	23.583	3	0		
Linear by-Linear association	17.225	1	0		
No of Valid cases	100				
* - 4 cells (50.0%) have expected count less than 5 . The minimum expectedcount is 1.00					

Table 7: Association of Placebo with VAS in the study

Placebo	**VAS**				**Total**
	0	**1**	**5**	**10**	
Not Given	46	0	4	0	50
Given	26	2	18	4	50
Total	72	2	22	4	100
Chi - Square Tests					
	Value	**df**	**Asymp.Sig**	**(2-sided)**	
Pearson Chi Square	20.465*	3	0		
Likelihood Ratio	23.583	3	0		
Linear by-Linearassociation	17.225	1	0		
No of Valid cases	100				
* - 4 cells (50.0%) have expected count less than 5 . The minimum expectedcount is 1.00					

Table 8: Association of Ormeloxifene with Nodularity(Cardiff scaling) in the study

Ormeloxifene	**Nodularity(Cardiff scaling)**			**Total**
	0	**1**	**4**	
Not Given	21	1	28	50
Given	40	7	3	50
Total	61	8	31	100
Chi - Square Tests				
	Value	df	Asymp.Sig	(2-sided)
Pearson Chi Square	30.579*	2	0	
Likelihood Ratio	34.343	2	0	
Linear by-Linear association	26.527	1	0	
No of Valid cases	100			
* - 2 cells (33.3%) have expected count less than 5. The minimum expectedcount is 4.00				

Table 9: Association of Placebo with Nodularity (Cardiff scaling) in the study

Placebo	**Nodularity(Cardiff scaling)**			**Total**
	0	**1**	**4**	
Not Given	40	7	3	50
Given	21	1	28	50
Total	61	8	31	100
Chi - Square Tests				
	Value	Df	Asymp.Sig	(2-sided)
Pearson Chi Square	30.579*	2	0	
Likelihood Ratio	34.343	2	0	
Linear by-Linear association	26.527	1	0	
No of Valid cases	100			
* - 2 cells (33.3%) have expected count less than 5. The minimum expectedcount is 4.00				

Table 10: Duration for healing in the study

Group	**Duration for healing(In weeks)**			
	6	**8**	**10**	**12**
Ormeloxifene	4	10	17	19

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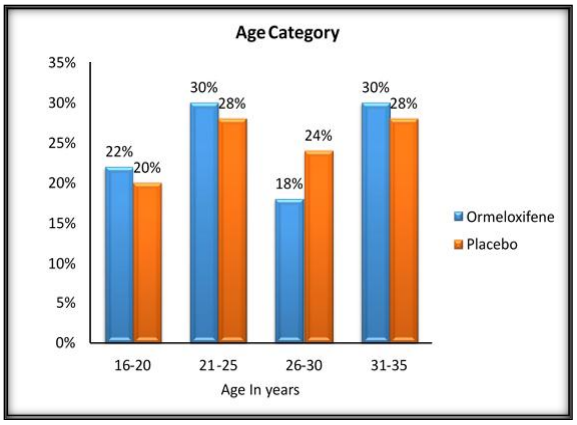

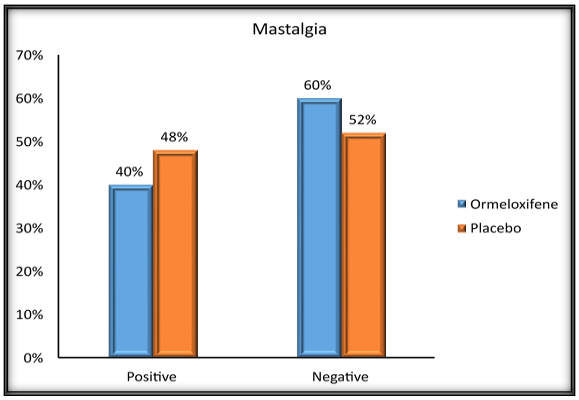

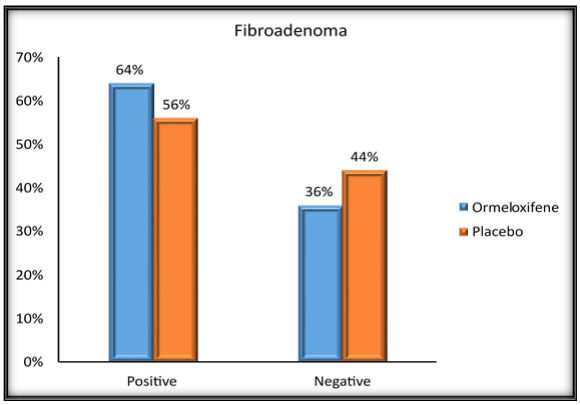

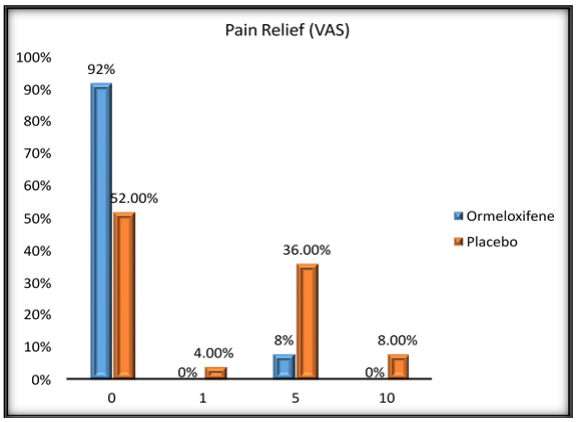

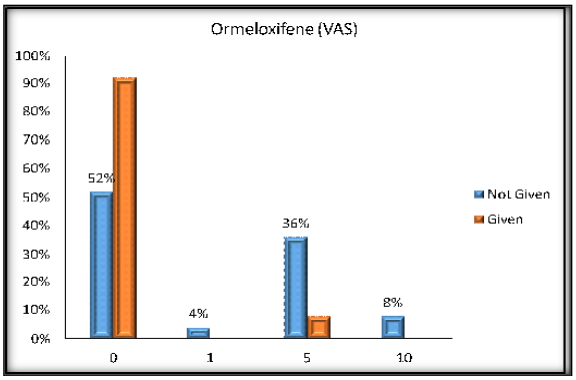

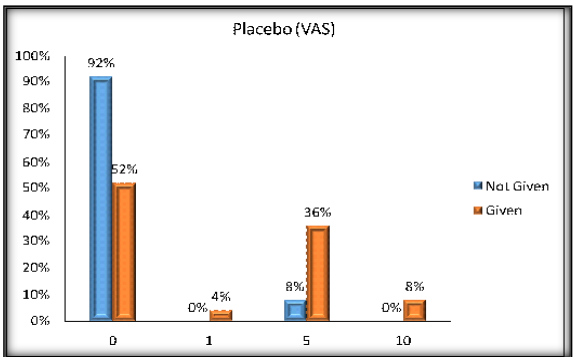

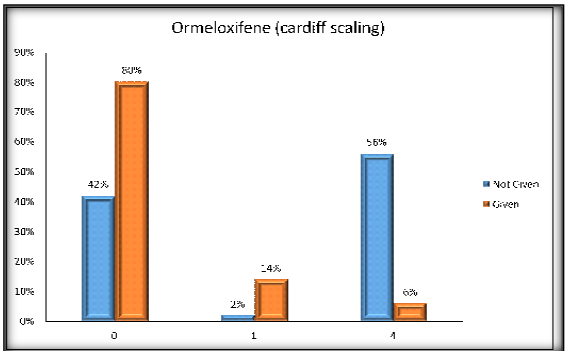

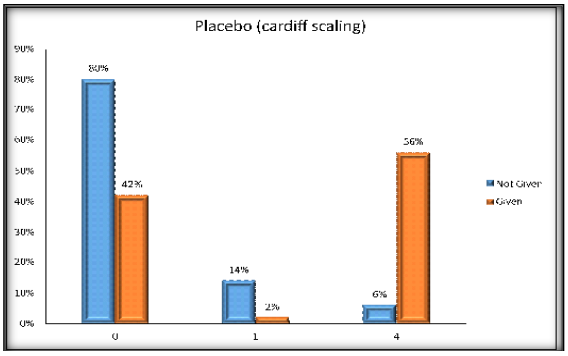

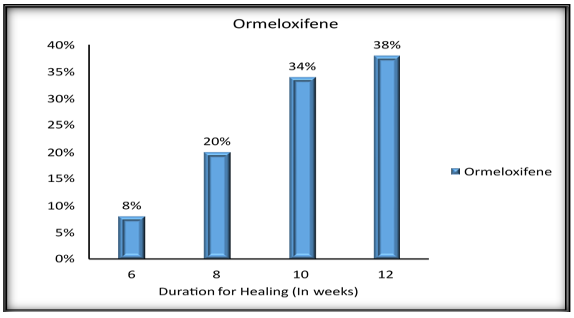

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DISCUSSION

Fibroadenoma is the most common benign tumour of females less than 30 yrs old and 2nd most common neoplasm of females , 20 % of the patient shows bilateral and 20 % shows multiple fibroadenoma . There was lot of medical management but there is no proof and standard treatment for these benign breast disease conditions like fibroadenoma and mastalgia . surgical treatment also not satisfactory as it leads to lot of mental stress, hence we decided to do this study instead of simple observation in patients who is willing for treatment ,as 15 % of fibroadenoma will regress spontaneously over 1 – 6 yrs observation.

There are lot of studies going on to find the effectiveness of tamoxifene ,danazol, for regression of fibroadenoma and mastalgia. But above this drugs has reported some side effects . With ormeloxifene , only minimal studies was conducted and also found to be effective in treating fibroadenoma and mastalgia with minimal side effects.

Hence, I have conducted a prospective randomised control study in Namakkal medical college hospital ,of about hundred patients coming to hospital with the complaints of pain in the breast and lumpiness in the breast . The patients are selected according to the inclusion and exclusion criteria. In the age group of 15- 35 yrs and those with mastalgia and breast swelling or nodularity are included in the study. The patients with breast carcinoma, and those with uterine hyperplasia and lactating mothers are excluded in the study.

Patients with benign breast disease includes mastalgia, fibroadenoma, fibroadenomatous hyperplasia, fibrocystic disease, mastitis, sclerosing adenosis and breast abscess. Patients with benign breast disease often present with pain and swelling. They frequently visit the clinic for the complaints of pain and nodular swelling. Most of the benign breast diseases are treated conservatively with medications and rarely surgery. There is no satisfactory treatment for this benign disease. After getting the informed consent from the patient, they are divided into two groups with 50 in each.

One group was treated with Ormeloxifene 30mg twice a week for twelve weeks and the other group was treated with placebo such as vitamin tablets for twelve weeks. Then for fibroadenoma patient subjected to fine needle aspiration cytology to rule out malignancy, and also ultrasonogram of the breast. The response was assessed with pain scale and breast lump size assessed with Lucknow – Cardiff scale as well as Ultrasound breasts. The patients are followed for 6 months.

Mean age of study patients treated with ormeloxifene is 26.3years and those treated with placebo is 25.96 years. Of these 44 patients has mastalgia ,among them 20 (40%) was treated ormeloxifene and the remaining 24(48%) was treated with placebo. simillarly of total 60 patients of fibroadenoma, 32 (64%) patients with ormeloxifene and the remaining 28 (56%) with placebo . 56 mastalgia and 40 fibroadenoma patients in control group is again divided into two, one group is treated with ormeloxifene and the other with placebo.

Using visual analog pain scale, the above mastalgia patient is assessed, 92% of the mastalgia has score 0, 0% of patients has score 1 ,then 8% patients has score 5% and 0% of patient had score 10. Thus 92 % of patients fully cured with ormeloxifene and also only 8 % has moderate pain.

By using Lucknow Cardiff scaling for assessing nodularity , 80% had score 0 , 14 % had score 1, only 6 % shows score 4 .And hence 80 % of patients completely cured with ormeloxifene ,14 % has decreased size in nodularity and size . Only 6% doesnot show any response to treatment with ormeloxifene. And also mean time for healing is 10 weeks. Hence the calculated p value for ormeloxifene is 0.000 which is stastistically significant. The patients treated with ormeloxifene has no adverse effect, with good patients compliance. The study data is based on 6 months follow-up only. Long term results of ormeloxifene on recurrence and further decrease in size require further studies in future.

CONCLUSION

Patients with mastalgia and fibroadenoma attends the clinic for the fear of malignancy. Reassurance is enough after the thorough investigation. But pain affects the day to day activities. These patients treated with ormeloxifene 30mg twice a wk, which is selective estrogen receptor modulator with antioestrogenic action on breast, had good compliance with the no side effects.

Ormeloxifene therapy in fibroadenoma patients showed statistically significant regression of nodularity and also decrease the pain in mastalgia patients in a period of twelve weeks.

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