



## A COMPARATIVE STUDY ON USE OF PROGESTERONE AND ORMELOXIFENE IN MEDICAL MANAGEMENT OF DUB IN PERIMENOPAUSAL AGE GROUP.

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**ABSTRACT** **Introduction:** Abnormal uterine bleeding is defined as any bleeding pattern that differs in the frequency, duration and amount from a pattern observed during a normal menstrual cycle or menopause. It is one of the commonest gynecological problems for which women seek medical advice frequently. Medical treatments include nonsteroidal anti-inflammatory drugs, or antiprostaglandins, tranexamic acid, the progestogen releasing intra-uterine devices, combined oral contraceptives pills, and other hormonal therapies. Present study was conducted on 100 women in perimenopausal age with DUB to compare efficacy between progesterone and ormeloxifene for medical management of DUB for a period of 6 months in a tertiary health care center.

**Aims And Objectives:** 1.) To compare efficacy of progesterone and ormeloxifene in medical management of DUB in perimenopausal age group.

**Method And Material:** A Prospective randomized comparative study was conducted on 100 perimenopausal women with DUB for 6 months. Patient selected for medical management with ormeloxifene and progesterone were divided into two groups each comprising of 50 patients. Patients in Group 1 were administered 1 tab. of ormeloxifene (60mg) twice a week on Sundays and Wednesdays for first 12 weeks followed by 1 tab. of 60mg once a week Monday/Wednesday for next 12 weeks. Patient in Group 2 were administered Progesterone in form of 5mg norethisterone twice a day for 21 days for 6 months starting from day 5 till 25 th day of the menstrual cycle. (whole cycle treatment from 5-25 day). Followup was done after 3 and 6 months of treatment initiation. Treatment outcome was analysed on basis of Mean Hb, ET and change in menstrual and bleeding patterns as recorded by patients in menstrual diary.

**Results:** In present study, increase in mean Hb, diminution of Mean ET before and after treatment was more in patients in Group 1 (ormeloxifene) than Group 2 (progesterone) and this difference was found to be statistically significant. (P-value <0.05).

**Conclusion:** Ormeloxifene, due to its low cost, easy dosage schedule, minimal side effect profile, owing to its non hormonal nature and better efficacy at reducing menorrhagia than progesterone, definitely gets an upper hand when compared to progesterone.

**KEYWORDS :** Ormeloxifene, Progesterone, Norethisterone, Perimenopausal, DUB

### INTRODUCTION

Abnormal uterine bleeding (AUB) is one of the commonest gynecological problems for which women seek medical advice frequently. Abnormal uterine bleeding is defined as any bleeding pattern that differs in the frequency, duration and amount from a pattern observed during a normal menstrual cycle or menopause.

Regular cyclic menstruation results the choreographed relationship between the endometrium and its regulating factors. Any type of disturbance between the regulatory mechanism of pituitary ovarian axis or pelvic diseases results in abnormal uterine bleeding.<sup>[1]</sup>

Abnormal uterine bleeding affects 10-30% of reproductive aged woman and up to 50% of perimenopausal woman. Pattern and causes of AUB differs in different age group and reproductive status of the woman.<sup>2</sup>

DUB is one of the most common cause of abnormal uterine bleeding. It is a diagnosis of exclusion. Pathophysiology of DUB is largely unknown but occurs in both ovulatory and anovulatory menstrual cycles. Medical treatments include nonsteroidal anti-inflammatory drugs, or antiprostaglandins, tranexamic acid, the progestogen releasing intra-uterine devices, combined oral contraceptives pills, and other hormonal therapies. As no medical treatment is superior to another, each woman should be individually assessed as to appropriate management.

Present study was conducted on 100 women in perimenopausal age with DUB to compare efficacy between progesterone and ormeloxifene for medical management of DUB for a period of 6 months in a tertiary health care center.

### AIMS AND OBJECTIVE

1.) To compare efficacy of progesterone and ormeloxifene in medical management of DUB in perimenopausal age group.

### METHOD AND MATERIAL

Place of study: M.G.M Medical college Indore

**Sample Size:** 100

**Type Of Study:** Prospective randomised comparative study

**Inclusion Criteria:** Patients in perimenopausal age group with DUB

### Exclusion Criteria

Women with Uterine pathology, for example, uterine polyp, leiomyoma, adenomyosis, and iatrogenic endometrial disorder Pelvic pathology and malignancies Systemic disorders Any history of bleeding disorder Severe anemia (<7 g) Pregnancy, abortion, ectopic, increased bleeding due to IUCDS Consistent use of oral contraceptive History of breast malignancy.

**Duration Of Study:** 6 months.

### Analytical Test:

Data were compared using a t-test (paired and unpaired) and Mann-Whitney U-test for numerical variables and McNemar's Chi-square test for categorical variables. AP < 0.05 was considered significant.

### Study Procedure:

Patient attending gynea OPD with the complain of abnormal uterine bleeding were recruited in the present study and advised to maintain a menstrual diary. Diagnosis was confirmed by detailed history, investigations including CBC, RFT, blood coagulation profile, thyroid profile, histopathology, pelvic USG. Each woman was individually assessed for proper medical management. Women, who needed or wanted surgical treatment or refractory to medical t/surgery were excluded from the present study. Patient selected for medical management with ormeloxifene and progesterone were divided into two groups each comprising of 50 patients. Patients in Group 1 were administered 1 tab. of ormeloxifene (60mg) twice a week on Sundays and Wednesdays for first 12 weeks followed by 1 tab. of 60mg once a week Monday/Wednesday for next 12 weeks.

Patient in Group 2 were administered Progesterone in form of 5mg norethisterone twice a day for 21 days for 6 months starting from day 5

till 25 th day of the menstrual cycle. (whole cycle treatment from 5-25 day) . Followup was done after 3 and 6 months of treatment initiation. Treatment outcome was analysed on basis of Mean Hb, ET and change in menstrual and bleeding patterns as recorded by patients in menstrual diary.

**Table 1: Clinical Parameters Of The Patients Included In The Study**

CLINICAL FEATURE	GROUP 1 (ORMELOXIFEN E)	GROUP 2 (NORETHISTERONE )
1.)Mean Age	45.2	44.8
2.) Mean parity	2	2
3.)Socio economic status	III	III
4.) Duration of symptoms (before treatment ) (in months)	8.6 MONTHS	8.8 MONTHS
5.)Mean Hb	8.6	8.4
6.)Mean ET (before treatment ) (in mm )	12.12	12.09

Above table is based on clinical parameters of both groups recruited for study. Cases in both groups were comparable with respect to clinical parameters i.e age,parity,socioeconomic status,duration of symptoms,mean Hb and endometrial thickness (ET).

**Table 2. Bleeding Episodes Per Months Of Total Number Of Patients Before And After Treatment.**

Observation time (weeks)	No of bleeding episodes		
	GROUP 1	GROUP 2	P value
Pretreatment	102	100	<0.05
After 6 months	51	55	

**Table 3. Comparison Of Mean Hb Levels Before And After Treatment.**

Observation time (in weeks)	GROUP 1	GROUP 2
Pretreatment	8.6	8.4
After 6 months	10.4	8.8
		P -value <<0.05

Table 3 shows comparison in mean Hb level in both groups before and after treatment. Although increased level of mean Hb was observed in both groups but this increase was more in group 1 patients.

**Table 4. Comparison Of ET (in Mm) In Both Groups Before And After Treatment.**

Observation time	GROUP 1	GROUP 2
Pretreatment	12.12	12.09
After 6 months	9.8	11.02

P-value <0.05

**Table 5. Comparison Of Side Effect Profile Of Ormeloxifene And Progesterone**

Side effect	GROUP 1 No(%)	GROUP 2 No (%)
1.)Amenorrhea	4 (8%)	0
2.)Abdominal pain	1 (2%)	0
3.)Weight Gain	0	0
4.)Nausea	0	3 (6%)
5.)Head ache	0	1 (2%)
6.)Spotting	0	1 (2%)
7.)Breast tenderness	0	0

Most common side effect with ormeloxifene is amenorrhea followed by abdominal pain whereas with progesterone adverse effects such as nausea (6%), headache (2%) and intermenstrual spotting (2%) was noted. Side effect profile of ormeloxifene was found to be better as compared to progesterone due to its non hormonal nature.

## DISCUSSION

In present study , decrease in menstrual bleeding was measured on basis of increase in mean Hb, diminution of Mean ET before and after treatment in both groups which was more in patients in Group 1 (ormeloxifene) than Group 2 (progesterone) and this difference was found to be statistically significant.

Our findings were similar to the study conducted by **Bhattacharjee et al6 (3)** in which ormeloxifene was found to be superior to norethisterone in reducing menstrual blood loss.

**Chawla et al (4)** in their study conducted in 2017 also concluded superiority of ormeloxifene over progesterone in medical management of menorrhagia in women of perimenopausal age group which was evidenced by significant relief of symptoms and increase of Hb in patients in patients taking ormeloxifene.

**Agarwal et al. [5]**, in 2019, in a similar study ,conducted to compare the efficacy of ORM and norethisterone in the management of perimenopausal DUB, also concluded that ORM is more effective in reducing blood loss, improving Hb, and reducing ET than norethisterone.

## CONCLUSION:

In the present study both ormeloxifene and progesterone were found to be a good alternative for medical management of DUB . Ormeloxifene ,due to its low cost, easy dosage schedule, minimal side effect profile owing to its non hormonal nature and better efficacy at reducing menorrhagia than progesterone as supported by the fact that in present study perimenopausal women on ormeloxifene for pharmacological management of DUB had more improvement in Hb levels and reduction in ET than progesterone, lesser side effects ,ormeloxifene definitely gets an upper hand when compared to progesterone.

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