

## Original Article

## DECREASE IN NUMBER OF MENSTRUAL DAYS AFTER PROGESTERONE THERAPY FOR MANAGEMENT OF DYSFUNCTIONAL UTERINE BLEEDING

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**Objective:** To determine the mean decrease in number of menstrual days from baseline after progesterone therapy for management of dysfunctional uterine bleeding.

**Methods:** This Quasi-experimental study was conducted in Department of Obstetrics and Gynaecology, Unit-II, Services Hospital, Lahore for duration of Six months. Total 125 cases were included in the study through Non-probability, purposive sampling from OPD of Services Hospital, Lahore. Informed consent and demographic information was obtained. Number of menstrual days were asked and noted. Patients were advised to take oral dydrogesterone 10mg two times a day (BD) from 5th menstrual day to 26th day cyclically. Patient was followed in OPD for up to 2nd cycle of every female. After 2 cycles from baseline visit, number of menstrual days was noted on proforma (attached).

**Results:** The mean age of females was  $29.98 \pm 7.14$  years. The baseline mean duration of menstrual days was  $8.56 \pm 1.32$  days. The mean duration of menstrual days after first cycle was  $6.03 \pm 1.24$  days and the mean duration of menstrual days after second cycle was  $5.58 \pm 1.14$  days. The reduction was significant ( $p$ -value=0.000). Thus the mean reduction of menstrual days after second cycle was  $3.00 \pm 1.10$  days.

**Conclusions:** Thus it was concluded from results of this study that progesterone therapy is effective in controlling dysfunctional uterine bleeding among females of reproductive age group.

**Keywords:** dysfunctional uterine bleeding, abnormal uterine bleeding, progesterone therapy, menstrual days.

### Introduction

Dysfunctional uterine bleeding (DUB) occurs frequently in women during the reproductive age and is unrelated to structural uterine abnormalities.<sup>1</sup> DUB accounts for 20% of gynecology outpatient visits. The exact mechanism is uncertain but is thought to be caused by dysfunction of hypothalamic-pituitary-ovarian axis.<sup>2</sup> Medical therapy, with the avoidance of possibly unnecessary surgery, is an attractive treatment option.<sup>1</sup> Dysfunctional uterine bleeding is one of the most common reasons for which patients seek the opinion of a gynecologist. Medical therapy is the principal tenet of treatment.<sup>3</sup> In approximately 50% of women, there is no organic pathology and DUB is diagnosed.<sup>4</sup> Now progestogens are being widely used in the management of excessive bleeding due to DUB but the regimen, dose and type of progestogen used varies widely, with little consensus about the optimum treatment approach.<sup>5,6</sup>

Currently there is not enough evidence comparing the effect of either progesterone alone or in

combination with estrogens for the treatment of dysfunctional uterine bleeding. No randomized trials were identified which compared progestogens with estrogens and progestogens or with placebo in the management of irregular bleeding associated with anovulation. With progesterone alone the duration of bleeding was also reduced following treatment, from a mean of  $8.5 \pm 2.4$  days before treatment to  $5.5 \pm 1.1$  days in the second cycle (mean reduction of  $3 \pm 1.4$  days,  $p$ -value=0.027).<sup>6</sup> Rationale of my study was to determine mean decrease in number of menstrual days after progesterone therapy for management of dysfunctional uterine bleeding. Literature has reported that Progesterone is effective in terms of reducing number of menstrual days but literature is present in foreign countries. Local data was missing as there is no recent study conducted in Pakistan. That is why we wanted to conduct this study to see the effect of progesterone for management of DUB in local population and to update local guidelines for management of DUB. So that we can establish a new way of DUB management to achieve more patients' satisfaction and reduce the burden of hospital and gynaecologists.

## Results

The mean age of females was  $29.98 \pm 7.14$  years. The minimum age was observed as 20 years while maximum age was 45 years (age range = 25 years). **Table -1.** There were 119 (95.2%) females who were married while 6 (4.8%) were unmarried.

### Table-2

The baseline mean duration of menstrual days was  $8.56 \pm 1.32$  days. The minimum days were noted as 6 days while maximum days were 12 days (range = 6 days). The mean duration of menstrual days after first cycle was  $6.03 \pm 1.24$  days. The minimum days were noted as 4 days while maximum days were 9 days (range = 5 days). The mean duration of

**Table-1:** Descriptive statistics of age (years) of the patients.

	n	125
Age (in Years)	Mean	29.98
	SD	7.14
	Minimum	20
	Maximum	45
	Range	25

**Table-2:** Distribution of females according to marital status.

Marital Status	Frquency	Percentage
Married	119	95.2%
Unmarried	06	4.8%
Total	125	100%

**Table-3:** Descriptive statistics of baseline menstrual days.

	Baseline	After 1st cycle	After 2nd cycle
Number of Menstrual days	n	125	125
	Mean	8.56	6.03
	SD	1.32	1.24
	Minimum	6	4
	Maximum	6	9
	Range	6	5

**Table-4:** Descriptive statistics of reduction in menstrual days after two cycles.

	n	125
Reduction in number of days)	Mean	3.00
	SD	1.10
	Minimum	0
	Maximum	5
	Range	5

Menstrual days after second cycle was  $5.58 \pm 1.14$  days. The minimum days were noted as 4 days while maximum days were 9 days (range = 5 days). There was significant reduction in menstrual days after 2 cycles by using progesterone therapy (p-value = 0.000). **Table-3** The mean reduction of menstrual days after second cycle was  $3.00 \pm 1.10$  days. The minimum days were noted as 0 days while maximum days were 5 days (range = 5 days). **Table-4**

## Discussion

Dysfunctional uterine bleeding is a common gynecologic disorder that can affect any woman during her reproductive years.<sup>7</sup> DUB in women with ovulatory cycles occurs as regular, cyclic bleeding. Menorrhagia may signify a bleeding disorder or a structural lesion, such as uterine leiomyomas, adenomyosis or endometrial polyps. Up to 20% of adolescents who present with menorrhagia have a bleeding disorder such as von Willebrand's disease.<sup>8</sup>

The cause of DUB is usually related to one of three hormonal-imbalance conditions: estrogen breakthrough bleeding, estrogen withdrawal bleeding and progesterone breakthrough bleeding. Estrogen breakthrough bleeding occurs when excess estrogen stimulates the endometrium to proliferate in an undifferentiated manner. With insufficient progesterone to provide structural support, portions of the endometrial lining slough at irregular intervals. The usual progesterone-guided vasoconstriction and platelet plugging do not take place, often resulting in profuse bleeding.<sup>9</sup>

Medical management and avoidance of surgery is always recommended, as the short period of drug therapy bridges the temporary phase of menstrual alterations successfully, wherein young subjects settle down with normal cycles and elderly subjects attain menopause.<sup>10,11</sup>

Preference should be for nonsteroidal agents, as steroidal agents will only aggravate the existing endocrine dysfunction. Ormeloxifene, a nonsteroidal drug, is easier to administer, cost effective, and has lesser side effects.<sup>12,13</sup>

Thus we included 125 females with mean reproductive age of  $29.98 \pm 7.14$  years. Mostly females were married [119 (95.2%)] while only 6 (4.8%) were unmarried.

In our study, we observed the baseline mean duration of menstrual days was  $8.56 \pm 1.32$  days, which was reduced to  $6.03 \pm 1.24$  days after first cycle and to  $5.58 \pm 1.14$  days after second cycle. Another study reported that females presented with baseline

Days after progesterone therapy.<sup>(2)</sup> The results of another study showed that the presence of statistically significant difference for the effectiveness of micronized progesterone at DUB according to the duration of the bleeding ( $p = 0.000$ ). On the basis of conducted clinical study the authors confirm the preventive effect of the micronized progesterone, as an effective and safe alternative in treating of premenopausal women with DUB.<sup>(14)</sup> Thus we observed a significant reduction in menstrual days after progesterone therapy. So the mean reduction of menstrual days after second cycle was  $3.00 \pm 1.10$  days. A study reported that with progesterone alone the duration of bleeding was also reduced following treatment, from a mean of  $8.5 \pm 2.4$  days before treatment to  $5.5 \pm 1.1$  days in the second cycle (mean reduction of  $3 \pm 1.4$  days,  $p\text{-value} = 0.027$ ).<sup>(6)</sup> Another study reported that women with DUB were treated with cyclical oral progestogens. Measured menstrual blood loss was effectively reduced from control to treatment cycles in both anovulatory (control cycle 131ml; treatment 80 and 64ml) and ovulatory women (control cycles 110 and 113ml; treatment 76 and 71ml). Three women with ovulatory DUB

did not show a useful response. Duration of bleeding was reduced in both groups and the pattern of loss changed. These regimens are effective forms of management for most women with ovulatory or anovulatory DUB.<sup>(15)</sup> A study reported that an overall reduction in mean blood loss by 54.76%. There was a significant reduction in menstrual blood loss in patients receiving progesterone.<sup>(16)</sup>

## Conclusion

It was concluded from results of this study that progesterone therapy is effective in controlling dysfunctional uterine bleeding among females of reproductive age group. Thus it was proved that Progesterone is effective in terms of reducing number of menstrual days and we have also get local data. Now we are able to establish a new way of DUB management to achieve more patients' satisfaction and reduce the burden of hospital and gynecologists.

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