

Original Research Article

## Normal Menstrual pattern profile

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**Abstract:** Menstrual cycle is a regular natural change in the female reproductive system which prepares the uterus for pregnancy. Commencement of menstrual cycle is considered as sign of puberty. The study was undertaken to know the pattern of the menstrual cycle in young women falling in age group 21 to 30 years. It was a hospital based observational study done in a tertiary care hospital over a 3 months period. Detailed history and pre designed questionnaire were recorded and analyzed. Average age of menarche was 13.3years±0.89years, duration of flow 3.4±0.73days with Basal metabolic rate (BMI) 22.31±1.39kg/m<sup>2</sup>.

**Keywords:** menstrual cycle, menarche, flow, BMI.

### INTRODUCTION

Menstruation is a unique phenomenon experienced in women's life which starts in adolescence and denotes the onset of reproductive maturity. It is not uncommon to find a change in menstrual cycle pattern and it is difficult to find a significant pathology to explain these irregularities. People generally relate pattern of menstrual cycles with the future fertility of a girl and get worried if it is slightly different from others. Parents should have knowledge regarding irregular menstrual pattern at menarche, experienced by a few girls, which is often due to anovulatory cycle's. With passage of time the menstrual cycles become regular and ovulatory. Generally girls lack scientific knowledge about menstruation and puberty. As age of menarche is decreasing, parents need to educate their daughters at an early age making them prepared for such changes so that they do not panic. It is important for doctors as well as girls and her family members to have knowledge regarding normal and abnormal menstrual patterns, age of menarche, so that they may seek, medical advice at the right time.

### AIM AND OBJECTIVE

The study was undertaken to know the menstrual pattern in young women with regular menstrual cycles.

### MATERIAL AND METHOD

This was a hospital based observational study conducted in the Department of Obstetrics and Gynaecology, S.M.S. Medical College, Jaipur from 1<sup>st</sup>

November 2016 till 31<sup>st</sup> January 2017. The present study was a hospital based observational study conducted on 87 women attending the Gynaecological outdoor. Willing participants between age 21-30years with normal menstrual cycle and BMI 17-32kg/m<sup>2</sup> were included in the study. Clients on hormonal treatment, herbal therapy for past 2 months, with history of infertility, pelvic inflammatory disease, runners, athletes, women doing vigorous exercise more than 1hr/day, breast feeding women less than 3 months postpartum, endocrine disorder like hypothyroidism, hyperthyroidism, hyperprolactinemia, pituitary and hypothalamic disorders, past and present history of malignancy and smoking were excluded from the study.

A written informed consent was taken from all women to participate in the study. The study comprised of 87 women. Predesigned questionnaire was given to the participants having questions regarding their menstrual pattern like age of onset of periods, average duration of flow, time interval between periods. BMI was also calculated for the participants from their height and weight.

### RESULTS

Mean age of menarche was 13.3yr ± 0.89yrs (Table 1) with maximum subjects (48.3%) having 13years as their age of menarche. Average duration of flow was 3.4±0.73days (Table 2). The mean BMI of study subjects was 25.31±3.39kg/m<sup>2</sup> with maximum no of women (56.3%) in BMI range of 25-30kg/m<sup>2</sup> (Table3).

**Table 1: Distribution of cases according to age of Menarche**

Age of Menarche (year)	Cases (n=87)	Percentage
11	3	3.4%
12	8	9.2%
13	42	48.3%
14	26	29.9%
15	8	9.2%
>15	0	0%

Mean Age of Menarche =13.3yr ± 0.89yrs

**Table 2: Distribution of cases according to duration of flow**

Duration of Flow (in Days)	No of Patients Cases (N=87)	Percentage (%)
2	11	12.6%
3	32	36.8%
4	42	48.3%
5	2	2.3%

Mean 3.4days ± 0.73days

**Table 3: Distribution of cases according to BMI**

BMI (in kg/m <sup>2</sup> )	Cases (n=87)	Percentage
<18.5	1	1.14%
18.5-25	49	56.3%
>25-30	35	40.2%
>30	2	2.29%

Mean BMI of study subjects = 22.31 ± 1.39 kg/m<sup>2</sup>

## DISCUSSION

Mean age of menarche in the study group was 13.3yr ± 0.89yrs(Table1).All women had their menarche before the age of 15 years with maximum number having it at the age of 13years. Tabassum Khatoon *et al.*; [2] came up with similar results with mean age of menarche 12.34±1.49 years among 150 adolescents' girls. In a study done by Parveen Kumar Pathak, Niharika Tripathi and S.V. Subramanian [3] it was observed that average age of menarche was reduced to 13.62 years (95% CI: 13.58, 13.67) among women born during late 1985–1989.

The mean duration of menstrual flow was 3.4days ± 0.73days (Table 2) with 48.3% women having 4 days duration of flow. In a study conducted by Shabnam Omidvar and Khryunnisa Begum [4], the mean age of menarche was 13.36±1.25years with duration of flow of 4.77±1.06days. In the study the authors found a significant relationship between BMI and menstrual pattern. The result showed that among 87 normally, menstruating, women maximum number of women(53%) had BMI between 18.5 to 25kg/m<sup>2</sup> and 43% had BMI between 25-30kg/m<sup>2</sup> (Table3). Similar results were seen in a study conducted by Saira Dars, Khashia sayed and Zara Yousufzai [1].

## CONCLUSION

There are many subjects coming to gynaecological OPD with menstrual irregularities but in reality they are having variation within normal ranges for which they just need reassurance. There is need to impart health education to girls in school regarding changes which they will face during puberty.

## REFERENCES

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