

# Pattern of Menstrual Irregularities amongst Women Presenting to Gynecological Outpatient Department

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## Abstract

**Background:** The length and regularity of menstrual cycles reflects the pattern of changes in ovarian steroid production. Disturbance of menstrual bleeding is a major social problem for women and accounts for high percentage of gynecological outpatient visits.

**Objective:** To look into various patterns of menstrual irregularities among the gynecological patients, its associated symptoms and its effect on their marital life.

**Methodology:** This cross sectional study was carried out in outpatient department of gynaecology and obstetrics of Punjab employee social security hospital Islamabad from January 2012 till December 2012. Patients presenting with menstrual irregularities, from the age of menarche till the age of menopause, were included in this study. A pre structured proforma was used to collect the data regarding descriptive statistics such as age, parity, marital status. Data regarding detailed menstrual history as well as various patterns of menstrual irregularities and its associated symptoms were also collected.

**Results:** Amongst a total of 100 patients studied, mean age was 33 years  $\pm$  2.37 SD. Eighty percent patients were married, and amongst them 75% had parity more than five and 25% had parity less than five. Prevalence of menstrual irregularities was found to be 70%. Regarding various patterns of menstrual irregularities, 30% complained of menorrhagia with mean duration of bleeding days of 8 SD  $\pm$  0.83. Oligomenorrhoea was reported by 20% patients and 50% patients complained of dysmenorrhoea, 30% experienced easy fatigue ability and 20% had generalized weakness. Menstrual irregularity had effect on daily life activity in 86% of cases. Additionally, among the 80 married females, 88% complained that menstrual irregularity had affected their marital life.

**Conclusion:** There is lack of information regarding menstrual problems and when to seek help. There is a need to educate the females regarding menstrual problems not only to improve their health but also as a possible indicator of existing pathology.

**Key words:** Menstruation, menstrual irregularities, menarche, menorrhagia.

## Introduction

Menstrual disorders are found to be associated with physical and psychological factors.<sup>1</sup> They are the common reason for visit to health care providers which include amenorrhoea, heavy menstrual blood loss, dysmenorrhoea and premenstrual syndrome.<sup>2</sup> Menstrual disorders frequently affect the women especially who suffer from dysmenorrhoea and heavy menstrual blood loss.<sup>3</sup> Menstrual cycle is the regular shedding of the endometrium every  $28 \pm 7$  days in response to the hormones. It is a natural phenomenon that occurs throughout the reproductive years of every women's life during which blood loss per cycle is not more than  $50 \pm 30$ ml.<sup>4</sup> The average menstrual cycle lasts for about 5 days.<sup>5</sup> Various menstrual irregularities like inter menstrual bleeding and amenorrhoea cause worry about the effects on fertility and physical health.<sup>6</sup> It also has economic consequences in terms of health care costs due to consumption of expensive hormonal drugs and laboratory tests.<sup>7</sup> Health problems arising from these menstrual irregularities can have effect on employment prospects.<sup>8</sup>

Knowledge regarding the various menstrual irregularities and its associated symptoms is important for their effective management in order to make these days less troublesome and tolerable for the women. Very few studies are available from Pakistan regarding menstrual irregularities. This cross sectional study was carried out to determine the pattern of menstrual irregularities and its related problems. This is done to infer the extent of problem for its effective treatment.

The aim of the study was to look into various patterns of menstrual irregularities among the gynecological patients, its associated symptoms and its effect on their marital life.

## Methodology

A cross sectional study was carried out in the obstetrics and gynaecology department from January 2012 till November 2012. All the patients from menarche till menopause, married, unmarried, nulliparous, multiparous presenting in out-patient department and admitted to in-patient department

with menstrual irregularities for treatment were included in this study.

A proforma was designed for the study. It was filled by the doctor attending the OPD, under direct supervision of professor. The questionnaire covered information about the demographic variables like age, marital status and parity. Detailed menstrual history included age of menarche, type of menstrual irregularity, duration of menstrual irregularity, past menstrual cycle (duration and days of bleeding), present menstrual cycle (duration and bleeding days) and number of pads soaked per day in comparison with the past cycle. Questions regarding associated symptoms like dysmenorrhoea, easy fatigue ability and generalized weakness were also asked.

Menstrual irregularities were defined as follow.<sup>9-12</sup>

- Regular menstrual cycle: Cycle repeated once every 21-35 days with duration of 2-8 days.
- Secondary amenorrhoea: Cessation of menstruation for more than 6 months in the absence of pregnancy.
- Oligomenorrhoea: Cycle monthly repeated about once every >35 days.
- Polymenorrhoea: Cycle repeated about once every <21 days.
- Hypomenorrhoea: Duration of periods <2 days and slight blood loss ≤1 pad/day.
- Menorrhagia: Duration of periods >8 days (≥5 pads/ day fully soaked).
- Dysmenorrhoea: Painful menstruation (spasmodic pain during first 2 days of cycle, lower abdominal radiating to legs)

Data were analyzed using SPSS version 15. Frequencies, percentages and mean values ± standard deviation (SD) were calculated. A p value <0.05 was considered statistically significant. Logistic regression analysis was performed to investigate factors associated with menstrual disorders.

### Results

A total of 100 patients presented during study period. Mean age of the females was found to be 33 years SD ± 2.37. Mean age of menarche was found to be 12 year SD ± 0.487. Regarding the marital status of the patients 80% (n 80) were found to be married and 20% (n 20) were unmarried. Among the patients who were married 75% (n=60) had parity more than five however 25% (n 20) had parity less than five.

Prevalence of menstrual irregularities was found to be 70%. Thirty percent (n=30) had regular and normal menstrual cycle with range of cycle between 25-28 days with mean of 26 days SD± 0.44 and bleeding days that ranged between 5-7 days with mean of 6 days SD± 0.25, but they had perceived it as abnormal and presented for advice.

Regarding various patterns of menstrual irregularities (shown in figure 1) 30% (n=30) complained of menorrhagia with mean duration of bleeding days of 8 SD ± 0.83 and

they also had heavy menstrual flow in comparison with their previous cycles, however their cycle length was between 26-27 days with mean of 26 days SD± 1.55.

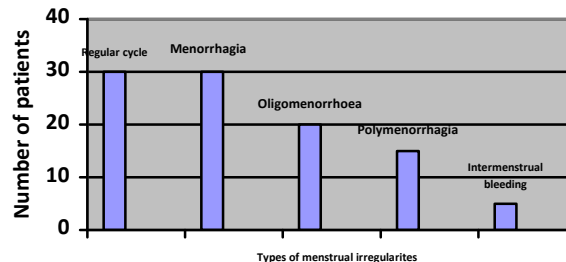


Figure 1: Pattern of Various Menstrual Irregularities

Symptoms associated with menstrual irregularity	Number (%)
Dysmenorrhoea	50 (50)
Easy fatigue ability	30 (30)
Generalized weakness	20 (20)

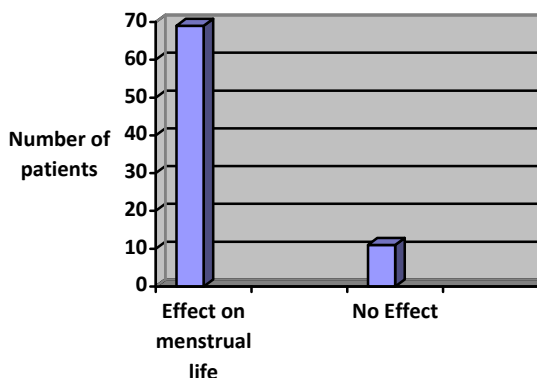


Figure 2: Effect of Menstrual Irregularity on marital life of Patients

Oligomenorrhoea was reported by 20% (n=20) patients and their cycle length ranged from 35-45 days with mean of 40 days SD ± 1.25 and bleeding days of 1 to 2 with mean value of 1 day SD±0.88. Fifteen percent (n=15) presented with cycle length of less than 21 days with mean of 18 days SD±1.86 and 5% (n=5) presented with complaint of intermenstrual bleeding. Regarding the associated symptoms (table 1) with menstrual irregularity, 50% patients

complained of dysmenorrhoea, 30% experienced easy fatigue ability while 20% (n=20) had generalized weakness. Menstrual irregularity had effect on daily life activity of the patients. As shown in figure 2, 86% (n=69) reported effect of menstrual irregularity on their daily life; however 14% (n=11) reported no effect with p value <0.05. Regarding effect on the marital life among the 80 married females 88% (n=70) patient complained that menstrual irregularity had effected their marital life, while 12% (n=10) reported no with p value<0.05.

## Discussion

Menstrual irregularity is a common symptom in the family practice setting.<sup>13</sup> Management of abnormal uterine bleeding can be complex.<sup>14</sup> Physicians are often unable to identify the cause of menstrual abnormalities even after a thorough history taking and examination.<sup>15</sup> Therefore, its management may involve many decisions about diagnosis and investigations, which often occur simultaneously and without any evidence based guideline.<sup>16</sup>

Mean age of the patients who presented with menstrual abnormality was found to be 33 years. Mean Age of menarche was found to be 12 years which is in coordination with a study conducted in Bangladesh which showed age of menarche to be 12 years.<sup>17</sup> Despite variation worldwide and with in US population mean age at menarche has remained relatively stable between 12-13 years.<sup>18</sup>

Length and regularity of menstrual cycle reflects changes in ovarian steroid production.<sup>19</sup> In our study 30% complained of menorrhagia (heavy menstrual blood loss) they not only gave history of increased days of bleeding but also heavy menstrual blood flow. Women with heavy periods are bothered by its impact on daily life however the main judgment is always made based on what is normal for them in the context of amount and patterns of blood loss.<sup>20</sup>

The menstrual disturbance that may differ in its characteristics and perhaps its androgenic and ovarian steroid environment is oligomenorrhoea. In our study oligomenorrhoea was reported by 20% patients. Oligomenorrhoea is found to be strongly associated with the poly cystic ovaries and in exercising women so it is critical to closely examine the metabolism and endocrine status of the women who present with oligomenorrhoea especially in physically active women.<sup>21</sup>

Inter menstrual bleeding is a heterogeneous category just like cycle length less than 21 days and other irregular pattern.<sup>22</sup> However repeated cycles less than 21 days or other irregular patterns require endometrial sampling.<sup>23</sup> Through various studies it is found that socioeconomic status and various stresses of life lead to abnormal patterns of menstruation.<sup>24</sup>

An important aspect of our study was that 30% of the patients who had regular and normal range of menstrual cycle between 25-28 with mean of 26 days and with

bleeding days that ranged between 5-7 days with mean of 6 days, they had perceived it as abnormal and presented for consultation. WHO reported that 18 million women of the world aged 30-35 years perceive their menstrual bleeding to be excessive.<sup>25</sup>

Menstrual irregularities also have influence on the life of the females. Among our patients 86% reported effect of menstrual irregularity on their daily life and 88% patient complained that menstrual irregularity had affected their marital life. It is also seen that the risk of depression is high in women with menstrual irregularities especially with heavy menstrual flow.<sup>26</sup> Patients distress may be related more to disruption in work, sexual activity and quality of life.<sup>27</sup> Menstrual dysfunction also result in both infertility and increased future risk of various diseases like diabetes and cardiovascular diseases.<sup>28</sup>

## Conclusion

Mostly patients are unaware about what represents normal menstrual pattern. It is important to educate patients regarding range of normal cycle length. It is equally important for the clinicians to have an understanding of bleeding patterns and ability to differentiate between normal and abnormal conditions. Menstrual cycle as an additional vital sign adds a powerful tool for the assessment of normal development and exclusion of pathological conditions.

## References

1. Iqlesion E A, Coupey S M. Menstrual abnormalities: diagnosis and management. *Adolesc Med* 1999; 10:225-73.
2. -Mc Evoy M, Chang J, Coupey S M. Common menstrual disorders in adolescence: nursing interventions. *MCN Am J Matern Child Nurs* 2004; 29: 41-9.
3. Cakir M, Mungan I, Karakas T, Giriskan I, Okten A. Menstrual pattern and common menstrual disorders among university students in Turkey. *Pediatr Int* 2007; 49:938-42.
4. Beek, Jonathan S. Puberty and dysmenorrhoea treatment. *Novak's Gynaecology* 14<sup>th</sup> ed. London: Williams and Wilkins publications Inc; 2006: 1696.
5. Chiou MH, Wang H H, Yang Y H. Effect of systematic of menstrual health education on dysmenorrheic female adolescent's knowledge, attitudes and self care behaviour. *Kaohsieng J Med Sci* 2007;23: 183-90.
6. Clark LR, Barnes- Harper K T, Ginsburg K R, Holmes W C, Schwarz D F. Menstrual irregularities from hormonal contraception: a cause of reproductive health concerns in minority adolescent young women. *Contraception* 2006; 74:214-9.
7. Huston A M et al. Knowledge, attitude and consequences of menstrual health in urban adolescent females. *J Pedi and Adol Gynecol* 2006;19:271-75.
8. Kadir R A, Edlund M, Von Mackensen S, The impact of menstrual disorders on quality of life in women with inherited bleeding disorders. *Haemophilia* 2010; 6: 832-39.
9. Howard W J. *Novak's text book of gynaecology* 12<sup>th</sup> ed. Philadelphia: Williams and Wilkins publications 1996.
10. Carlson KJ, Eisenstat SA, Ziporyn T. *The new Harvard guide to women's health*. Harvard, Massachusetts, Harvard University Press, 2004:384.

11. Toaff R, Ballas S. Traumatic Hypomenorrhoea – Amenorrhoea ( Asherman’s Syndrome). *Fertility and Sterility* 1978; 30: 379-87.
12. Monga A. Disorders of menstrual cycle. *Gynaecology by Ten Teachers* 18<sup>th</sup> ed .Wiley Backwell 2006: 43-58.
13. Albers J R, Hull Sil, Wesley RM. Abnormal uterine bleeding. *Am Fam Physician* 2004;64:1915-26.
14. Nicholson WK, Ellison SA, Grason H, Powe NR. Patterns of ambulatory care use of gynaecological conditions: a natural study. *Am J Obstet Gynecol* 2001; 184: 523-30.
15. ACOG practice bulletin: management of anomalous bleeding. *Am Fam Phys* 2001; 72: 263-71.
16. Kilbourn CL, Richards CS. Abnormal uterine bleeding. Diagnostic considerations, management options. *Postgrad Med* 2001; 109: 137-8.
17. Rah JH. Age of onset of onset, nutritional determinants and seasonal variations in menarche in rural Bangladesh. *J Health Popul Nutr* 2009; 27: 802-7.
18. Chumla WE, Schubert CM, Roche AF et al. Age at menarche and racial comparisons in US girls. *Pediatrics* 2003; 111: 110-13.
19. Kato I, Toniolo P, Koenig KL et al. Epidemiological correlates with menstrual cycle length in middle aged women. *Eur J Epidemiol* 1995; 15: 809-14.
20. Santer M, Wyke S, Warner P. What aspect of periods are most bothersome for women reporting heavy menstrual bleeding? Community survey and quantitative study. *BMC Women’s health* 2007;7: 8.
21. Awdishu S, Williams NI, Laredo SE, DeSuza MJ. Oligomenorrhoea in exercising women: a polycystic ovarian syndrome phenotype or distinct entity? *Sports Med* 2009; 39: 1055-69.
22. Ely JW, Kennedy CM, Clark EC, Bowdler NC. Abnormal uterine bleeding: A management algorithm. *J Am Board Fam Med* 2006; 19: 590-602.
23. Field CS. Dysfunctional uterine bleeding. *Pri Care* 1988; 15: 561-74.
24. Alsworth JE et al. The influence of stress on menstrual cycle among newly incarcerated women. *Women’s Health Issues* 2007;17: 202-9.
25. Goldrath MH. Hysteroscopic endometrial ablation 1995;2: 559-72.
26. Harlow BL, Cohen LS, Otto MW, Spiegelman D, Cramer DW. Early life menstrual characteristics and pregnancy experiences among women with and without major depression. The Harvard study of mood and cycles. *J of Effective Disorders* 2004; 79: 167-76.
27. Apgar BS, Kaufman AH, George-Nwogu V, Kittendorf A. Treatment of menorrhagia 2007;75:1813-19.
28. Jahanfar S. Genetic and environmental determinants of menstrual characteristics. *Ind J of Human Genetic* 2012; 18: 187-92.