

MENORRHAGIA-EVALUATION OF ETIOLOGICAL FACTORS AND MANAGEMENT

Obstetrics & Gynaecology

**Rama Rao
Tadikonda**

Principal, Department of pharm D, CMR College of Pharmacy, Hyderabad, Telangana.

Manasa Samala*

Pharm D students, CMR College of Pharmacy, Hyderabad, Telangana. *Corresponding Author

**Shruthi
Mudigonda**

Pharm D students, CMR College of Pharmacy, Hyderabad, Telangana.

**Swetha Sree
Pasupula**

Pharm D students, CMR College of Pharmacy, Hyderabad, Telangana.

ABSTRACT

Purpose of the study: The present study is aimed to evaluate the etiological factors and management of menorrhagia with the main objectives of identifying the common cause, duration of symptoms, USG findings, treatment and age groups who are more prone to the condition. **Methodology:** A prospective observational analysis of 100 cases was conducted in the Department of obstetrics and gynecology for 6 months. The cases are collected based on inclusion and exclusion criteria. The data was collected with the consent of the patient from the case sheets. **Results:** The results of the data were obtained by performing a statistical analysis of the study using spss software. From the study, it is observed that perimenopausal age group women (54%) are more prone to menorrhagia. The study also reveals that 54 women have leiomyomas, as the common etiological factor. The study identifies that hysterectomy is the most common treatment used to treat menorrhagia besides its side effects like sepsis. Out of 100, most of the cases with menorrhagia are showing uterine fibroids in USG Findings. It leads to an increased usage of hysterectomies. **Conclusion:** The perimenopausal age group is more prone to menorrhagia, leiomyoma is the common cause which is found in USG findings as uterine fibroids, besides its long-term side effects hysterectomy is performed on most of the patients due to its low-cost efficacy, and fast relief.

KEYWORDS

Menorrhagia, Perimenopausal, etiological factor, hysterectomy

INTRODUCTION:

Menorrhagia, one of the most frequently encountered symptoms in Gynaecology[1], is described as a Menstrual blood loss of more than 80 mL per cycle that interferes with the physical, emotional, social, and quality of life of a woman [2].

More than 70% of all gynecological consultations in the peri- and postmenopausal age group are related to menorrhagia (3). 16% of women aged 15 to 44 were diagnosed with menorrhagia in India, and 25 percent of women complained of longer periods of bleeding or stains. The World Health Organization (WHO) estimated the prevalence of three-month severe bleeding to be 8–27 % in multi-country research [4].

Menorrhagia, or abnormal uterine bleeding (as it is more often known), is divided into nine types by the PALM-COEIN acronym. AUB is divided into structural and non-structural causes as given in table no 1:

Table no 1: PALM-COEIN Classification (5)

Structural causes (PALM)	Non-structural causes (COEIN)
Polyp	Coagulopathy
Adenomyosis	Ovulatory dysfunction
Leiomyoma	Endometrial dysfunction
Malignancy And Hyperplasia	Iatrogenic
	Not yet classified

HMB turned into given if two or more of the following criteria were met; 1. Passing of big blood clots, 2. Want for double sanitary safety (both towels and tampons), 3. Need for common modifications of tampons and towels (meaning changes every 2 hours or much less, or 12 sanitary gadgets in line with length) and 4. Flooding via clothes or bedding (6).

Antifibrinolytics, Nonsteroidal Anti-inflammatory Medicines (NSAIDs), the combined Oral Contraceptive pill, Progestogen, Danazol, and Gonadotropin-releasing Hormone Analogues (GnRH-a) are a number of medical Treatments for Menorrhagia.

The Levonorgestrel-releasing Intrauterine gadget is every other Medical Treatment for Menorrhagia. Physicians must provide women with Menorrhagia immune to Medication Treatment with a change surgical alternative. In such instances, Endometrial Ablation

techniques and Hysterectomy may be considered, taking into account the Patient's age, Physical condition, and willingness to go through Surgery (7).

This study was conducted to evaluate the etiological factors, duration of the symptom, USG findings and treatment in patients with menorrhagia in the hospital setup.

MATERIALS AND METHODS:

In this prospective observational study, a total of 100 women from age of menarche to 50 with a history of excessive bleeding per vagina attending the outpatient or inpatient department of obstetrics and gynecology, Gandhi hospital, Hyderabad were included in the study. Blood loss during menstruation is considered excessive if the patient has vaginal bleeding for more than 7 days with or without clots and the patient's hemoglobin values are 10gm% or less. Patients with HIV, TB and obstetrics-related conditions are excluded. The study was carried out for 6 months (October 2021- March 2022). Detailed information regarding the patient's age, age of menarche, previous menstrual history, duration and severity of the symptom, medical history including recent weight gain or loss, endocrine disease like diabetes, renal, any cardiac and hematological disorders, Past surgical history, Family history, vitals, gravidity and parity were taken. The presenting complaints about onset, duration and amount of blood loss were noted. Details about the menstrual interval, bleeding duration, clots' passage, and the number of pads required per day were collected. Complete blood tests, thyroid tests, prolactin levels, Pelvic ultrasonography and pap smear tests were performed.

The management depended on the patient's condition and the underlying cause of menorrhagia. Tranexamic acid is given as first-line therapy to control severe blood loss in some patients. Anemia is corrected by oral Haematinics or by blood transfusions. Hormones were prescribed for patients who are not responding to non-hormonal therapy and Surgical therapy was done in patients who failed medical therapy.

RESULTS:

100 cases with menorrhagia are grouped according to their ages as Puberty age (14-19), Reproductive age (20-39), Peri-menopausal age (40-45), Post-menopausal age (46-50) and are compared. The

maximum number of patients are in the age group between 40-45, which means the chances of getting menorrhagia are more in perimenopausal women.

Table 1: Distribution of cases according to age (n=100)

Age groups	No. of cases	Percentage (%)
14-19	3	3
20-39	37	37
40-45	54	54
46-50	6	6
Total	100	100

The patients suffered from menorrhagia for less than 6 months to more than 3 years and had anemia due to loss of blood for a prolonged period. When our cases are compared it is found that most of them suffered from loss of blood for less than 6 months (71%).

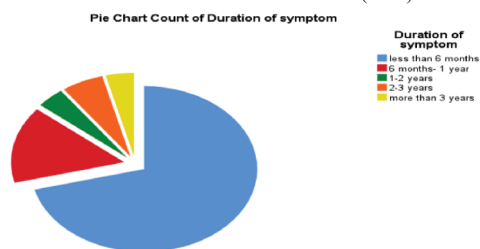


Figure no 1: Distribution of cases based on the duration of symptom (n=100)

Among 100 cases presenting as menorrhagia, in 48% of cases the cause of menorrhagia is leiomyoma, 23% had Ovulatory dysfunction, 15% had Endometrial dysfunction, 8% had Adenomyosis and 6% had Polyp. This means Leiomyoma is the common cause of menorrhagia and is mostly seen in reproductive age and peri-menopausal age groups.

Table no 2: Distribution of cases based on Etiological factor (n=100)

Etiological factors as per PALM-COEN Classifications	Frequency	Percentage (%)
Leiomyoma	48	48
Ovulatory dysfunction	23	23
Endometrial dysfunction	15	15
Adenomyosis	8	8
Polyp	6	6
Total	100	100

Table 3 shows that all the cases are prescribed with Haematinics, Tranexamic acid is given as first-line therapy in 39% of the cases along with Haematinics, 16% had hormonal therapy along with Haematinics and 11% had thyroxine and when surgical therapy is compared with medical therapy most of the cases undergone a hysterectomy (63%) due to failure to medical therapy (37%) as shown in Figure 2

Table no 3: Distribution of cases based on medical therapy (n=100)

Medical Treatment	Frequency	Percentage
Haematinic only	34	34
Haematinics + Tranexamic acid	39	39
Haematinic + Hormonal therapy	16	16
Haematinic + Thyroxine	11	11
Total	100	100

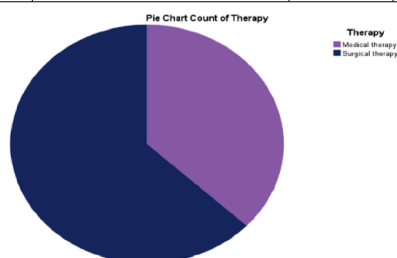


Figure no 2: Medical therapy vs Surgical therapy (n=100)

The USG Sonographic findings showed that most of the cases have Uterine fibroids in the uterus. In 16% of cases, the USG findings are normal, later they were found to have anovulatory dysfunction and other problems which are not structural.

Table no 4: Distribution of cases based on USG Findings (n=100)

USG Findings	No. of subjects	Percentage (%)
Uterine Fibroid	48	48
Polycystic	22	22
Bulky Uterus	8	8
Polyp	6	6
Normal findings	16	16
Total	100	100

DISCUSSION:

An irregular amount, regularity, or timing of uterine corpus bleeding is referred to as abnormal uterine bleeding (AUB)(8). It might be acute or chronic. Chronic abnormal uterine bleeding is characterized by abnormal uterine bleeding that has persisted for longer than six months. Acute abnormal uterine bleeding is a significant bleeding episode that must be treated immediately to stop further blood loss. Patients with chronic abnormal uterine bleeding may also experience acute abnormal uterine bleeding. From excessive menstrual bleeding in adolescence to postmenopausal bleeding, abnormal uterine bleeding can happen at any moment in the reproductive age range(9).

Evaluation of patients with menorrhagia and identifying them can be achieved by history, physical examination, laboratory findings, USG findings, and PAP smear test.

Among 100 cases with menorrhagia, the most common age group presenting with AUB is between 40-45. The studies of Anupma Kumari et al., (2018) (10) and Rupal Samal et., (2020) (11) in which peri-menopausal women are having more chances of getting menorrhagia than other groups are comparable with our study.

In our study, most of the women had a loss of blood for less than 6 months whereas the study conducted by Sujata et al.,(2018) (12) showed that most of the women had suffered from the loss of blood for more than 3 years, which is a contradiction with our study

The Ultrasonographic scans were performed in all cases and the results mostly show uterine fibroids in the uterus(48%) which is concordance with the study conducted by Bharat Talukdar et al.,(2016) (13). The presence of uterine fibroids is called leiomyoma which means leiomyoma is the common etiological factor that's effecting women with menorrhagia which is parallel with both studies conducted by Nishi Mitra et al., (2020) (14) and shahana Ishaq et al.,(2020) (15).

When medical therapy is considered, Tranexamic acid is more effective and used as first-line therapy in most cases which is similar to the studies performed by Henri et al., (2012) (16) and Joseph et al., (2000) (17). When the medical therapy is failed or if the condition is severe the cases had undergone surgical treatment. Besides its side effects Hysterectomy is the only surgical therapy performed for its fast relief, low cost and shorter hospital stay, as most of the women are from the peri-menopausal age group hysterectomy is preferred which is similar to the study conducted by Sreeja Rani et al., (2013) (18) and it is a contradiction to the study performed by Svetlana Djukic (2016) (19).

CONCLUSION :

Women's menorrhagia can be caused by a variety of diseases, the most prevalent of which is Leiomyoma. When compared to all age groups, perimenopausal age is the most affected. When medical therapy is ineffective, hysterectomy is commonly used despite its serious side effects. Ultrasonography should be the first line of investigation in perimenopausal women after clinical examination and Pap smear since it is conveniently accessible, less expensive, safe, and non-invasive. The uterine fibroid is the most commonly encountered finding in USG findings.

REFERENCES:

- G.A.Vilos, G.Lefebvre, and G.R: Guidelines for the Management of Abnormal Uterine Bleeding. SOGC clinical practice guidelines. Journal of Obstetrics and Gynaecology Canada; vol. 106, pp. 1-6, 2001.
- Sripasert I, Pakrashi T, Kimble T, Archer DF: Heavy Menstrual Bleeding Diagnosis and Medical Management. Contracept Reprod Med; Jul 24;2:20, 2017.
- Talukdar B, Mahela S. Abnormal uterine bleeding in perimenopausal women: Correlation with sonographic findings and histopathological examination of hysterectomy specimens. J Midlife Health. 2016 Apr-Jun;7(2):73-7.

4. Sule Gokyildiz, Ergul Aslan, Nezihe Kizilkaya Beji, Meltem Mecdi, "The Effects of Menorrhagia on Women's Quality of Life: A Case-Control Study", International Scholarly Research Notices, vol. 2013, Article ID 918179, 7 pages, 2013. <https://doi.org/10.1155/2013/918179>
5. Walker MH, Coffey W, Borger J. Menorrhagia. [Updated 2021 Sep 2]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK536910>
6. Pados, G., Athanatos, D., Tsolakidis, D. et al.: Treatment Options for Dysfunctional Uterine Bleeding: Evaluation of Clinical Results. *Gynecol Surg* 8; 385–393, 2011.
7. Sriprasert, I., Pakrashi, T., Kimble, T., & Archer, D. F. (2017). Heavy menstrual bleeding diagnosis and medical management. *Contraception and reproductive medicine*, 2, 20. <https://doi.org/10.1186/s40834-017-0047-4>
8. Munro MG, Critchley HO, Broder MS, Fraser IS; FIGO Working Group on Menstrual Disorders. FIGO Classification system (PALM-COEIN) for causes of abnormal uterine bleeding in non gravid women of reproductive age. *Int J Gynaecol Obstet*.2011;113(1):3-13.
9. Chuong CJ, Brenner PF. Management of abnormal uterine bleeding. *Am J Obstet Gynecol*.1996;175(3):787-92.
10. Anupma Kumari, Ra Kumar. Abnormal uterine bleeding in peri-menopausal age: An observational study. *Indian journal of osetet. gynec research* vol 5 (4), 539-543, 2018.
11. Samal, R., O., G., Vaithy, A., S., Habeebullah, S., ... G.: Clinicopathological Analysis of Abnormal Uterine Bleeding in Reproductive and Post Menopausal Women in a tertiary care center of the southeastern part of India. *Indian Journal of Obstetrics and Gynecology Research*, 7(1), 66–70, 2020. <https://doi.org/10.18231/IJOGR.2020.014>
12. Deo, Sujata & Agrawal, Monica & Jaiswar, Shyam & Sankhwar, Pushplata & Babu, Suresh & S, Sonalika & Nigam, Nitu. (2018). Evaluation of etiological factors and management of puberty menorrhagia. *International Journal of Biomedical Research*. 9. 112. [10.7439/ijbr.v9i3.4662](https://doi.org/10.7439/ijbr.v9i3.4662).
13. Talukdar, B., & Mahela, S.: Abnormal Uterine Bleeding in Perimenopausal Women: Correlation with sonographic findings and Histopathological Examination of Hysterectomy Specimens. *Journal of mid-life health*, 7(2), 73–77, 2016. <https://doi.org/10.4103/0976-7800.185336>
14. Mitra, Nishi & Patil, Pooja & Sethia, Ayushi: Etiological Factors of Abnormal Uterine Bleeding according to PALM- COEIN Classification in Perimenopausal Women in a tertiary care center. *International Journal of Reproduction, Contraception, Obstetrics, and Gynecology*. 9. 799. 2020.
15. Chandniwala S I, Jain M . : Abnormal Uterine Bleeding in Perimenopausal Women: Clinical histopathological and sonography correlation. *Indian J Obstet Gynecol Res*;7(3):402-405, 2020.
16. Leminen, H., & Hurskainen, R. (2012). Tranexamic acid for the treatment of heavy menstrual bleeding: efficacy and safety. *International journal of women's health*, 4, 413–421. <https://doi.org/10.2147/IJWH.S13840>
17. Joseph Y. Lee, Philip M. Hahn, Janice P. Van Dijk, Robert L. Reid, Treatment of Menorrhagia with Tranexamic Acid, *Journal SOGC*, Volume 22, Issue 10, 2000, Pages 794-798, ISSN 0849-5831, [https://doi.org/10.1016/S0849-5831\(16\)31019-9](https://doi.org/10.1016/S0849-5831(16)31019-9)
18. Ani VR, Sreeja & Thomas, Sindha. (2013). LEIOMYOMA, IS A MAJOR CAUSE OF ABNORMAL UTERINE BLEEDING. *Journal of Evolution of Medical and Dental Sciences*. 2. 2626-2630. 2013
19. Djukic, Svetlana & Lekovic, Danijela & Jovic, Nikola & Varjadic, Mirjana. (2016). Unnecessary Hysterectomy due to Menorrhagia and Disorders of Hemostasis: An Example of Overuse and Excessive Demand for Medical Services. *Frontiers in Pharmacology*. 7. 10.2016