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Original Research Article

Clinico epidemiological profile of abnormal uterine bleeding in reproductive womens: a cross sectional study

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ABSTRACT

Background: Abnormal uterine bleeding (AUB) is a common reason for women of all ages to consult their gynecologist and is one of the most common debilitating menstrual problems ending up in hysterectomy in developing countries. This study was done with the aim to observe the clinical and demographic profile of the patients and the pattern of AUB.
Methods: It is an observational study, conducted in department of obstetrics and gynaecology, DR Rammanohar Lohia institute of medical sciences, Lucknow, Uttar Pradesh from August 2018 to July 2019. All patients in the reproductive age group with symptoms of abnormal uterine bleeding were included in the study.
Results: Majority (37.50%) of the women were in the age group of 30-40 years. 71.66% were multiparous and maximum women (60%) were in normal BMI. 69.17% were belonging to middle class. Commonest presentation was menorrhagia (48.3%) followed by oligomenorrhoea (18.1%) followed by polymenorrhoea (17.27%).
Conclusions: Excessive menstrual blood loss is a common reason for women to seek medical help and leads to large demands in health resources According to our study majority of the women with AUB were in the age group of 30-40 years, were multiparous with normal BMI belonging to middle class. Commonest presentation was menorrhagia. Following study highlights the clinical and epidemiological pattern of abnormal uterine bleeding of reproductive age group, which is crucial factor in management for these patients. In order to predict causal association, further more studies with larger sample size of higher level of evidence should be conduct to draw causal evidence.

Keywords: Abnormal uterine bleeding, Menorrhagia, Polymenorrhoea, Reproductive age group women

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 a common problem having a long list of causes in different age groups.[1] It reflects a disruption in the normal cyclic pattern of ovulatory hormonal stimulation to the endometrial lining. The bleeding is unpredictable in many ways. It may be excessively heavy or light or may be prolonged, frequent or random. Excessive uterine bleeding is one of the most common complains encountered in clinical practice.

Abnormal uterine bleeding is the commonest presenting symptom and major gynaecological problem responsible for as many as one-third of all out patient gynaecologic visit.[2,3] Causes of such bleeding may include neoplastic

growth, hormonal dysfunction, reproductive tract trauma, infection, and coagulopathies.

The mechanisms involved in AUB vary, but each reflects an abnormal pattern of steroid hormone stimulation that deviates from the sequence characterizing the normal ovulatory menstrual cycle. The key to successful clinical management of abnormal uterine bleeding is to recognize or identify which mechanism is operating or responsible.

The aim of this study was to study the clinical and demographic profile of women in the reproductive age group and their pattern of abnormal uterine bleeding for easy diagnosis and optimal management of the condition.

METHODS

The study was conducted over a period of one year from August 2018 to July 2019 in Department of Obstetrics and Gynaecology, Dr. Ram Manohar Lohia Institute of Medical Sciences, Lucknow, Uttar Pradesh. Population consisted of patients in the reproductive age (15-50 years) group presenting with abnormal uterine bleeding.

Inclusion criteria

- Patients in the reproductive age group (15-50 years)
- Abnormal uterine bleeding.

Exclusion criteria

- Patients more than 50 years of age
- Patients with uterine bleeding due to intra-uterine devices
- Patients with uterine bleeding due to any organic pathology
- Patients not giving their consent to participate in the study.

Sample size

Sample size was based on level of precision; precision consists of significance level and allowable error. In this study 5% significance and 20% allowable error is considered. Totally 120 study subjects were included in the study as this number of patients attended hospital during the study period.

For the purpose of sample size estimation, study used was Sharma A et al.[4]

Finite population correction has been applied to the sample size formula

$n = N*X/(X+N-1)$

where,

$X = Z\alpha/2^2*p*(1-p)/d^2$

$Z\alpha/^2$ critical value of the normal distribution at $\alpha/2$ (for a confidence level of 95%, a = 0.05 and the critical value is 1.96).

$Z\beta$- critical value of the normal distribution at β (for power of 80%, β=0.02 and the critical value equals to 0.84.

P-Estimated sample proportion of AUB (abnormal uterine bleeding) among females of 15-50 years of age. Value is 17.9% from Sharma A et al.

d-Margin of error for appropriate level of precision (value is 0.05).

N- Estimated population size i.e. approximate frequency of 15-50 years aged females attending out-patients department for AUB complains (value is 250).

At 95% confidence interval and power of 80%, the minimum sample size (n) required is 119 patients.[5]

Rounding off to the nearest whole number the sample size was taken to be 120.

Methodology

All the patients with symptom of heavy menstrual bleeding, dysmenorrhea, metrorrhagia, Irregular bleeding, and other symptoms were enrolled in the present study. A quantitative tool was designed to collect the data of patients visiting our center. A detailed history was taken which included the age, parity, education, socioeconomic status, clinical symptoms and amount of blood loss. Information was also collected regarding associated gynecological complain, any medical disease, previous hormonal or operative treatment. It was followed by detailed physical examination that included detailed general examination and systemic examination. In every patient per speculum examination and per vaginal examination was performed. And the relevant investigations were advised. The data so obtained was collected and analysed.

Statistical analysis

After completion of study data was statistically described in frequencies (number of cases) and percentages (%) when appropriate. The relevant data were entered in Microsoft Excel software 2013. All the data were exported to the software SPSS version 11.5 and analysis was done.

RESULTS

In the present study total 120 women who presented to the gynae OPD with abnormal uterine bleeding were enrolled. Majority of the women were in the age group of 30-40 years i.e 37.50% followed by 30.83% in the age group of 40-50 years (Table 1).

Table 1: Distribution based on age.

Age (years)	No. of cases	Percentage
Less than 20	3	2.50%
20-30	35	29.16%
30-40	45	37.50%
40-50	37	30.83%
Total	**120**	**100.0%**

Maximum cases were 72 (60%) had normal BMI (18.5-24.5), 30 cases (25.0%) were overweight (25-29.9), 11 cases (9.0%) were underweight (less than 18.5), 05 (4.0%) were obese (30-34.9) while 2 cases (2.0%) were morbidly obese (BMI more than 35) (Table 2).

Table 2: Distribution based on BMI.

BMI	No. of cases	Percentage
Less than 18.5	11	9.0%
18.5-24.9	72	60.0%
25-29.9	30	25.0%
30-34.9	05	04.0%
More than 35	02	02.0%
Total	**120**	**100.0%**

AUB is mainly a disease of multiparous women ie abt 71.66%. 20.0% were para 3 while 41.67% were grandmultiparas (Table 3).

Table 3: Distribution based on parity.

Parity	No. of cases	Percentage
0	19	15.83%
1	15	12.50%
2	12	10.0%
3	24	20.0%
4 or more	50	41.67%
Total	**120**	**100.0%**

In our study the incidence in the upper, middle and lower socioeconomic groups as per modified Kuppusswamy classification was 0.83%, 69.17% and 29.99% respectively (Table 4).

Table 4: Distribution based on socioeconomic status.

Socioeconomic status	No. of cases	Percentage
Upper	1	0.83%
Upper middle	38	31.67%
Lower middle	45	37.5%
Upper lower	23	19.16%
Lower	13	10.83%
Total	**120**	**100.0%**

According to our study the commonest presentation was menorrhagia (48.3%) followed by oligomenorrhoea (18.1%) followed by polymenorrhoea (17.27%) (Table 5).

Table 5: Distribution based on menstrual pattern.

Pattern	No. of cases	Percentage
Menorrhagia	58	48.3%
Polymenorrhagia	16	13.33%
Polymenorrhoea	19	17.27%
Metrorrhagia	07	06.30%
Oligomenorrhoea	20	18.1%
Total	**120**	**100.0%**

Table 6: Distribution based on symptoms associated with abnormal uterine bleeding.

Associated symptoms	No. of cases	Percentage
Pelvic pain	10	8.33%
Postcoital bleeding	04	3.33%
Dysmenorrhoea	16	13.33%
Mood changes	13	10.83%
Weakness/fatigue/lethargy	19	15.83%
None	58	48.33%
Total	**120**	**100.0%**

Majority of the cases had no associated symptoms with AUB. Those who had associated symptoms, fatigue, weakness and lethargy were the most common among them (Table 6).

DISCUSSION

Abnormal uterine bleeding is one of the most common problems seen among patients attending gynecological outpatient department. Authors suggest AUB occurs most often at extremes of reproductive years, a time when anovulation is common.[6] Majority of the women were in the age group of 30-40 years i.e 37.5%. These results were comparable to studies done by Jain et al, Ramesh et al and Palwade et al where the maximum incidence of DUB in the age group 30-40 years was 28.75%, 38.74% and 56% respectively.[7-9] Archana B, Michelle F, found that 76% of the patients enrolled in their study for having AUB were in the age group of 37-45 years.[10] Nirmala AVK, reported highest incidence i.e. 37.46% in the age group of 21-30 years.[11] Whereas Gautam A et al, found the incidence to be highest in 15-20 years.[12] Thanyapa W et al, Saraswathi D et al, Ghosh et al and Davey et al reported the maximum incidence of 33.5%, 46% and 39% respectively in the 5th decade of life.[14-16]

In our study the higher incidence in the reproductive age group is due to the increase in severity of symptoms and increasing disability to continue their household chores they attended hospital at this age.

The present study corresponds to the study by Subedi S et al, with maximum cases (60%) having normal BMI followed by overweight in 33.3% cases. Komathi R et al, also reported in their study that 76% cases had normal BMI followed by overweight in 14% cases.[17,18]

Israel et al, also reported that AUB is a disease of multipara. Hamblen observed parity doubtlessly enhances the incidence of irregular bleeding.[19,20] Joshi et al, and Rosario et al reported 61.6% and 97% of AUB cases were multiparous respectively.[21,22] We found that majority of AUB cases in our study were multiparous. Incidence of AUB increases as parity increases, maximum 40.9% with grand multiparas followed by para 3 which was 21.81% in our study. Multiparous women have a slightly more average blood loss as compared to nulliparous. Parity per se has limited role in DUB and its importance lies in relation to patient management.[20]

According to Jain et al, 51.87%cases of AUB belonged to middle socioeconomic status, 38.13% cases from low and 10% cases from higher socioeconomic status which is comparable to our study where the incidence in the above-mentioned groups as per modified Kuppuswamy classification is 66.3%, 32.7% and 0.9% respectively.[7]

In our study, the commonest presentation was menorrhagia (51.87%) which is in concurrence with the reporting done by Muzaffar et al (51.9%).[23] Similar results were seen with studies done by Mehrotra VG et al, and Nair RK et al, who reported that, 50% and 64% of DUB cases presented with menorrhagia respectively. Jaideep M et al (38.67%), Rashmi V (40%) and Pilli GS et al (46%) also observed menorrhagia as the most common mode of presentation.[9,24-26]

Majority of the cases (52.72%) had no associated symptoms with AUB. Those who had associated symptoms, fatigue, weakness and lethargy were the most common among them (12.7%) followed by dysmenorrhoea (11.8%) which was in concordance with the study by Nair et al.[25]

CONCLUSION

Excessive menstrual blood loss is a common reason for women to seek medical help and leads to large demands in health resources. According to our study majority of the women with AUB were in the age group of 30-40 years, were multiparous with normal BMI belonging to middle class. Commonest presentation was menorrhagia.

Following study highlights the clinical and epidemiological pattern of abnormal uterine bleeding of reproductive age group, which is crucial factor in management for these patients. In order to predict causal association, further more studies with larger sample size of higher level of evidence should be conduct to draw causal evidence.

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