International Journal of Current Advanced Research
ISSN: O: 2319-6475, ISSN: P: 2319-6505, Impact Factor: 6.614
Available Online at www.journalijcar.org
Volume 8; Issue 06 (E); June 2019; Page No.19320-19323
DOI: http://dx.doi.org/10.24327/ijcar.2019.19323.3721

Research Article

A STUDY OF DISTRIBUTION OF ABNORMAL UTERINE BLEEDING USING FIGO CLASSIFICATION OF "PALM-COEIN"

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A R T I C L E I N F O

Article History:
Received 6th March, 2019
Received in revised form 15th April, 2019
Accepted 12th May, 2019
Published online 28th June, 2019

Key words:
Abnormal uterine bleeding, FIGO classification, PALM-COEIN

A B S T R A C T

Background: Abnormal uterine bleeding affects 14-25% of women in reproductive age group and still Higher ino lder age group. AUB is defined as any bleeding from the uterine corpus differing in frequency, duration and amount.
Purpose: To study the prevalence of AUB and to study the distribution of causes of AUB using FIGO classification system of PALM COEIN.
Methodology: This study was conducted in VMKVMCH during December 2016 to December 2017.500
Non gravid women with menstrual disorders attending gynaecology outpatient department were enrolled. Women who were pregnant and those with local lesions in vulva, vagina and cervix were excluded.
Results: AUB was the most common compliant (38.8%) inpatients attending gynaecology Outpatient department. The mean age of the patient was 41.71±8.526 years. In the present Study, PALM contributes 66%(n=330) and COEIN contributes 34% (n=170). The most common Cause of AUB was leiomyoma 39% followed by ovulatory dysfunction 29.8%, adenomyosis 9%, combined 7%, malignancy 6%, polyp 5% and soon.
Conclusion: FIGO classification of AUB using PALM COEIN helped as apractical tool in assessing the etiology.

INTRODUCTION

Abnormal uterine bleeding (AUB) is the most common and frequent cause of visits by women in gynaecology outpatient department. AUB affects 14-25% of women in reproductive age and 50% in perimenopausal age group[1,2].AUB is defined as any bleeding which is deviation from the normal limits of menstrual cycle in frequency, cyclicity or quantity. Acute AUB is the bleeding of sufficient quantity which requires immediate intervention and chronic AUB is the bleeding from uterine corpus that is abnormal in duration, volume and frequency which is present for more than 6 months [3,4].

The older terminologies such as menorrhagia, metorrhagia were discarded[5].The newer terminologies such as heavy menstrual bleeding (HMB) and heavy prolonged menstrual bleeding (HPMB) were introduced. HMB is defined as the excessive menstrual blood loss which interferes with woman's physical, social, emotional and/or material quality of life. Heavy prolonged menstrual bleeding (HPMB) is defined when the HMB exceeds 8 days.Irregular episodes of bleeding, often light and short, occuring between otherwise fairly normal menstrual periods is called as intermenstrual bleeding.

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Bleeding which occurs more than 4 episodes in a 90-day period is the frequent menstrual bleeding, previously called as polymenorrhoea and the bleeding which occurs in one or two episodes in a 90-day period is infrequent menstrual bleeding (oligomenorrhoea)[5,6].

In 2011, FIGO has classified the causes of AUB and arranged in aacronym as "PALM COEIN"[7,8]. PALM includes structural causes such as polyp, adenomyosis, leiomyoma and malignancy. COEIN includes non-structural causes such as coagulopathy, ovulatory dysfunction, endometrial dysfunction, iatrogenic and not yet classified [5-9]. This study was done to see the feasibility of use and implementation of FIGO classification system of AUB in clinical practice.The aim is to study the prevalence and distribution of causes of AUB using FIGO classification system of PALMCOEIN.

MATERIALS AND METHODS

This was a prospective study done in Vinayaka mission kirupanandavariyar medical college hospital, Salem district of Tamilnadu in 500 women with complaints of abnormal uterine bleeding who attended gynaecology OPD. All non-gravid women with menstrual disorders in the reproductive age group were included in this study whereas those with pregnancy, age less than 15, more than 55 years and obvious lesions in vulva, vagina and cervix were excluded. The menstrual disorders

include infrequent menstrual bleeding, frequent menstrual bleeding, heavy menstrual bleeding, heavy prolonged menstrual bleeding and intermenstrual bleeding.

Consent obtained. Detailed history, clinical examination, blood investigations, pelvic ultrasound were done. Conservative management was done using NSAID, tranexamic acid, progesterone, etc., The procedures such as fractional curettage, polypectomy, hysterectomy were done if needed and the specimen was sent for histopathological examination. The final diagnosis of AUB-P, AUB-A, AUB-L and AUB-M were made based on histopathological examination report. Coagulopathy AUB-C was labeled based on the history of bleeding diathesis and prolonged bleeding or clotting time. Prothrobin time and Activated partial thromboplastin time were done if needed[10]. Ovulatory dysfunction AUB-O was labeled in women with unpredictable, irregular timing and variable amount of bleeding. When AUB occurred in cyclical, predictable pattern, typical of ovulatory cycles and no other cause identified, then it was considered as disorder of endometrium and placed under AUB-E. Bleeding following history of usage of contraception or drugs such as harmonal steroids in the preceeding three months were labelled as iatrogenic AUB-I. The rest were categorized as not yet classified AUB-N. Data were analysed using SPSS version 21. The descriptive statistical data were expressed in frequencies, percentages and chi square tests.

RESULTS

Total women attended gynaecology outpatient department in VMKVMCH, Salem from December 2016 to December 2017 was 10,500. Of these 4,082 patients were AUB which contributes to 38.8%. In this 500 patients were taken for the present study. The mean age of the study population was 41.71±8.526 years. The age ranges from 17 years to 55 years. Table 1 shows the age distribution of the study population. 330 (66%) women were in the age group of 41-50 years. 110 (22%) of women were between 20-40 years. 45 (9%) were between 51-55 years and 15 (3%) were between 17-19 years. Of the parity, 55 women (11%) were nulliparous and 445 women (89%) were multiparous.

Table 2 shows the BMI. 44% of women in the present study were overweight, 39% were normal weight, 14 % were obese and 9% were underweight. Table 3 shows the menstrual disorders. There was overlapping of one or more menstrual disorders in the study population. However, heavy menstrual bleeding was the most common compliant in 301 women (62%) followed by dysmenorrhoea in 245 women (49%), infrequent menstrual bleeding in 105 women (21%), frequent menstrual bleeding in 90 women (18%) and so on.

The minor surgical procedures such as fractional curettage, dilatation curettage, polypectomy and cervical biopsy were taken if needed. Overall in 500 women, hysterectomy was done in 295 (59%) women. 5 patients (1%) took chemoradiation and the remaining 200 (40%) women were managed conservatively. The specimens were sent for histopathological examination and the final diagnosis was obtained.

Figure 1 shows the distribution of causes of AUB. In the present study, PALM contributes 66% (n=330) and COEIN contributes 34% (n=170). Leiomyoma was the most common cause of AUB followed by ovulatory dysfunction. The distribution of structural causes of AUB were polyp (5%), adenomyosis (9%), leiomyoma (39%), malignancy (6%), combined AUB-P,A (6%) and AUB-P,L (1%). The distribution of non structural causes of AUB were coagulopathy (1%), ovulatory dysfunction (29.8%), endometrial dysfunction (0.2%), iatrogenic (6%) and not yet classified (15%).

DISCUSSION

The present study was done to stratify the causes of AUB based on PALMCOEIN. The mean age of the patients in this study was 41.71±8.526 years. 66% of patients belong to 41-50 years. This was similar to Betha K *et al* and Quershi *et al*[11,12]. Of the menstrual compliants, heavy menstrual bleeding was the most common 62%. This was similar to Sharda B Ahmed *et al* study [13].

Polyps are usually benign. Uterine polyps are usually endometrial, fibroid, adenomatous and placental polyps. Majority are asymptomatic. But some may present with heavy menstrual bleeding, intermenstrual bleeding or postcoital bleeding.[14] In the present study, 5% of causes of AUB were due to polyps. This was similar to Quershi *et al* (3%) and Sharda B Ahmed *et al* (2.5%) studies [12,13].

Adenomyosis is the presence of islands of endometrial glands and stroma in the myometrium of uterus. More than one-third of hysterectomy specimens from women aged 40 years and above show adenomyosis. Mostly these women were parous and they present with heavy menstrual bleeding and dysmenorrhoea [14,15]. In the present study, 9% of women had adenomyosis. This was similar to Sharda B Ahmed *et al* (8.5%) and Betha K *et al* (12%) [11,13].

Leiomyoma is the benign smooth muscle tumor of uterus. Their growth is oestrogen and progesterone dependent, as they are rarely seen before puberty and after menopause. In the reproductive age, the incidence of uterine leiomyomas are higher. In the present study also leiomyoma was the most predominant cause of AUB (39%). This was similar to Betha K *et al* (30.4%) and Quershi *et al* (25%) [11,12]. Leiomyomas are subclassified based on their site as submucosal (L-SM) and others (L-O). The cavity of uterus is distorted by submucosal fibroid and they cause heavy menstrual bleeding and dysmenorrhoea. HMB is mainly due to increased endometrial surface area, hyperestrogenism, endometrial hyperplasia, etc.,[5,6]

Chronic anovulatory cycles causes hyperestrogenism which leads to endometrial hyperplasia and malignancy. 6% of patients contributes to AUB-M. This was similar to Quershi *et al* 6.7%, Betha K *et al* and Mishra *et al* studies [11,12,16]. In the present study, combined causes of structural causes were 7%. AUB-P, A contributes 6% and AUB-P,L contributes 1%.
The present study had 5 women (1%) with coagulation dysfunction. This was similar to Betha K *et al* 0.8% and Sharda B Ahmed *et al* 0.3% [11,13]. Ovulatory dysfunction present with unpredictable timing and variable amount of flow. In the present study, AUB-O was the second most common cause of AUB 29.8%. This was similar to Quershi *et al* and Betha K *et al* studies [11,12]. Endometrial cause of AUB is mainly due to disorders of haemostasis of endometrium. In the present study only one case (0.2%) was identified and this women had tuberculusendometritis. In Betha K *et al* and Mishra *et al* studies, AUB-E accounts to 12% of causes of AUB[11,16]. Usage of contraceptives such as IUCD, hormonal

steroids, anticonvulsants in the preceeding three months with heavy menstrual bleeding were labeled as AUB-I. In the present study it contributes to 1%. This was similar to Sharda B Ahmed *et al* study [13].When no other cause was identified, then AUB-N was labeled. It contributes to 2% in the present study.

The main advantage of this study was combined causes of AUB were identified, appropriate notation used and analysed[17,18]. The management was more focussed and tailored to specific cause[19,20]. The disadvantage was AUB-E and AUB-N being the diagnosis of exclusion, needs to be redefined and the investigation for identifying the disorder of haemostasis of endometrium are still lacking. The treatment for patients in AUB-N was vague.

CONCLUSION

The newer terminologies of disorders of menstruation and FIGO classification of causes of AUB was universally accepted. This make us ease in understanding the etiology of AUB and managing it effectively. However with the advancement in knowledge and improvement in medical science and technology this needs periodic modification through research.

Acknowledgements

Authors would like to thank all the women who participated in the study.

Summary

Funding: No funding resources
Conflict of interest: None declared
Ethical approval: The study was approved by institutional ethical committee

Table 1 Distribution of age

AGE (years)	N=500 n(%)
17-19	15 (3%)
20-40	110 (22%)
41-50	330 (66%)
50-55	45 (9%)

Table 2 BMI

BMI	N=500 n (%)
Underweight	15 (3%)
Normal	195 (39%)
Overweight	220 (44%)
Obese	70 (14%)

Table 3 Menstrual disorders

Menstrual disorders	n (%)
Infrequent menstrual bleeding	105 (21%)
Frequent menstrual bleeding	90 (18%)
Heavy menstrual bleeding	310 (62%)
Heavy prolonged menstrual bleeding	85 (17%)
Intermenstrual bleeding	35 (7%)
Dysmenorrhoea	245 (49%)
Postcoital bleeding	10 (2%)

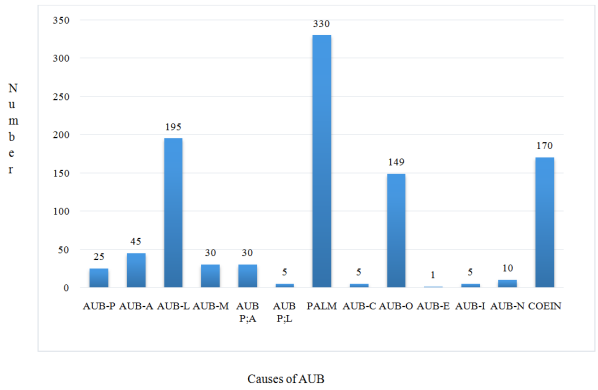

Figure 1 Distribution of causes of AUB

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How to cite this article:

Premapriya.G, Ashadevi.D, Ranjithraj.R and Sharmila.R (2019) 'A Study of Distribution of Abnormal Uterine Bleeding Using Figo Classification of "Palm-Coein"', *International Journal of Current Advanced Research,* 08(06), pp. 19320-19323.
DOI: http://dx.doi.org/10.24327/ijcar.2019.19323.3721

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