Using PALM-COEIN FIGO Classification for Categorization of Patients with Abnormal Uterine Bleeding

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Abstract

Background: Abnormal uterine bleeding is one of the most common problems of the women of reproductive age group leading to increased number of hospital visits. For describing and categorizing the common problem of abnormal uterine bleeding in these women, an alternative classification system polyp, adenomyosis, leiomyoma, malignancy and hyperplasia, coagulopathy, ovulatory dysfunction, endometrial, iatrogenic, and not yet classified, known by the acronym PALM-COEIN was developed by FIGO.Methods: This is a retrospective study on 150 patients of abnormal uterine bleeding to categorize them on the basis of PALM-COEIN classification. Patient were grouped under these categories after detailed history, examination, investigations and histopathological reports.

Index terms— abnormal uterine bleeding, adenomyosis, leiomyoma, ovulatory dysfunction, PALMCOEIN, Polyp.

1 Introduction

bnormal uterine bleeding (AUB) may be acute or chronic and is defined as bleeding from the uterine corpus that is abnormal in regularity, volume, frequency or duration and occurs in the absence of pregnancy.1,2

Abnormal uterine bleeding is one of the most common problems of the women of reproductive age group leading to increased number of hospital visits.

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For describing and categorizing the common problem of abnormal uterine bleeding in these women, an alternative classification system polyp, adenomyosis, leiomyoma, malignancy and hyperplasia, coagulopathy, ovulatory dysfunction, endometrial, iatrogenic, and not yet classified, known by the acronym PALM-COEIN was developed by FIGO.

PALM-COEIN, was published in 2011 by the International Federation of Gynecology and Obstetrics and adopted by the American College of Obstetricians and Gynecologists.3

The PALM-COEIN system uses bleeding pattern and etiology in order to classify uterine bleeding. The overarching term AUB is paired descriptive terms to denote bleeding patterns associated with AUB, such as heavy menstrual bleeding (instead of menorrhagia) and intermenstrual bleeding (instead of metrorrhagia). 3 The term dysfunctional uterine bleeding -often used synonymously with AUB in the literature to indicate AUB for which there was no systemic or locally definable structural cause -is not part of the PALM-COEIN system, and discontinuation of its use is recommended. 3 Thus, this classification system helps us in identifying the etiology of uterine bleeding which inturn helps us in managing these patients. In symptomatic women, there can be more than one cause for the same. So, precise diagnosis and classification helps us in better management.

2 II.

3 Methods

The present study is a retrospective observational study conducted at the Obstetrics and Gynecology Department of Smt. NHL Municipal Medical College and its affiliated hospitals (SVPIMSR and Sheth V. S. General Hospital & Chinai Maternity Home), from 16 th December, 2019 to 16 th July, 2020. We studied 150 women for this, who met the inclusion criteria.

4 a) Inclusion criteria

? Women belonging to reproductive age group, between menarche to menopause. ? History of unpredictable, irregular menses or excessive bleeding for prolonged duration. ? Increased frequency of menses and intermenstrual bleeding for at least 3 months of duration.

5 A b) Exclusion criteria

? Vaginal bleeding because of cervical cause ? Abnormal bleeding in antenatal patients.

After informed consent, we took detailed history including drug history and examined the patient, along with necessary blood investigations like CBC, Coagulation profile, S. TSH, S. Prolactin etc. and pelvic ultrasonography was done to rule out any structural abnormalities. We obtained the histopathology reports of endometrial biopsy or hysterectomy specimen wherever needed. The possible causes were identified based on examination and investigations, and patients categorized according to PALM-COIEN classification. Polyp, adenomyosis and leiomyoma were identified after per speculum and per vaginal examination followed by ultrasound and were categorized under AUB-P, AUB-A and AUB-L respectively. AUB-M category included patients with bleeding because of endometrial carcinoma diagnosed on the basis of histopathological report of endometrial biopsy. These patients were referred to other center for further management. AUB-C category included the patients taking any form of anticoagulant or with known history of coagulation defects since a younger age. AUB-O included bleeding due to ovarian dysfunction, with irregular timing or unpredictable bleeding patterns with variable amounts of bleeding. AUB-E was used for abnormal bleeding occurring in cyclical and predictable pattern usually suggestive of ovulatory cycle and no other cause was identifies. AUB-I included patients with intrauterine devices (inert or medicated) or having history of gonadal steroid intake in the preceding 3 months. Women not fitting into any category (Endometritis, AV Malformation) were put under not yet classified category i.e. AUB-N.4-6.

6 c) Statistical analysis

Data was analyzed and descriptive statistics were presented as frequencies and percentages.

7 III.

8 Results

We included 150 participants who fulfilled all the inclusion criteria in this study. All these cases were placed in the nine categories of the PALM-COEIN classification. After classifying the patients according to PALM-COEIN classification, it was found that Ovulatory dysfunction was the most common cause of AUB in patients presenting to the gynecology outpatient department (n=43, 28.67%). It was followed by leiomyoma (n=35, 23.33%) and endometrial causes (n=30, 20%) and were the top three etiologies for AUB respectively. Adenomyosis (n=20, 13.33%), not classified (n=10, 6.67%), iatrogenic (n=6, 4%), polyp (n=3, 2%), coagulopathy (n=2, 1.33%) and malignancy (n=1, 0.67%) contributing least to the PALM-COEIN classification as an etiology for AUB (Table 3).

9 Discussion

According to the study done by Qureshi and Yusuf, maximum patients of AUB were classified under leiomyoma category, the number being 25% followed by ovulatory dysfunction (24%).7 According to a study done by Gouri et al, maximum number of patients were categorized under ovulatory dysfunction (27%) followed by leiomyoma (24.67%). Also, in a study done by Tater A, Jain P &Sharma KN, maximum patients of AUB were seen in Ovulatory dysfunction (30%) followed by leiomyoma (24%).8 Similarly, in the present study also, ovulatory dysfunction (n=43, 28.67%) was found to be the most common cause of AUB followed by leiomyoma (n=35, 23.33%).

Specific management of various categories of PALM COEIN classification like AUB-P includes resection of polyp, AUB-A includes hysterectomy or adenomyomectomy (not frequently preferred), AUB-M includes surgery +/-adjuvant treatment, or if surgery is not possible, it can be managed using high dose progesterone or palliation (including radiotherapy), AUB-C includes using Tranaxemic acid, AUB-O can be managed by lifestyle modification or specific management of hyperprolactinemia using cabergoline or hypothyroidism using levothyroxine. Antibiotics can be given for endometritis and embolization can be done for AV malformations.

There are various previous studies done by **??**hrouf et In almost all the previous studies, ovulatory dysfunction and leiomyoma contribute the most for abnormal uterine bleeding.

97 V.

10 Conclusion

PALM-COEIN classification is a universally accepted and reliable method of knowing exact etiology following investigations, so that proper treatment can be done for AUB. This classification may need periodic modification with advancement of investigative modalities. Management is decided according to the cause of uterine bleeding, and this classification makes it upon the management of given cause.

11 Declarations

1

Age group (years)	Overall, n=150 (%)
<20 years	4 (2.67)
20-29 years	11 (7.33)
30-39 years	58 (38.67)
40-49 years	69 (46)
>49	8 (5.33)

Age group of 40-49 years (n=69, 46%) (Table 1) was the most common age group. With heavy menstrual bleeding (n=74, 49.33%) (Table 2) being the most common complaint.

Figure 1: Table 1 :

2

Complaint	n=150 (%)
Heavy menstrual bleeding	74 (49.33)
Irregular bleeding	35 (23.33)
Intermenstrual spotting	9 (6)
Frequent menses	32 (21.33)

Figure 2: Table 2 :

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11 DECLARATIONS

3

PALM-COEIN	n=150 (%)
Polyp	3 (2)
Adenomyosis	20 (13.33)
Leiomyoma	35(23.33)
Malignancy	1 (0.67)
Coagulopathy	2 (1.33)
Ovulatory dysfunction	43 (28.67)
Endometrial	30 (20)
Iatrogenic	6 (4)
Not known	10 (6.67)
IV.	

Figure 3: Table 3 :

Figure 4:

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