Section: Obstetrics and Gynecology

Original Research Article

STUDY IN PATIENTS WITH ABNORMAL UTERINE BLEEDING

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Received *: 08/04/2025*
Received in revised form *: 28/05/2025*
Accepted *: 16/06/2025*

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DOI: 10.70034/ijmedph.2025.2.471

Source of Support: Nil,
Conflict of Interest: None declared

Int J Med Pub Health
2025; 15 (2); 2602-2608

ABSTRACT

Background: The aim is study in patients with abnormal uterine bleeding in the age group of 36-45 years attending the gynecology outpatient department.
Materials and Methods: This is a prospective hospital based study carried out in total of 100 women with AUB were investigated with the aim of estimating the prevalence of patients with AUB attending the gynec OPD and to know various causes, investigations and treatment modalities used.
Results: Among the patients attending gynec outpatient clinics, the prevalence of AUB was 19.4 %. AUB found was Leiomyoma 32%, followed by Ovulatory dysfunction 20%, Endometrial disorder 19%, Adenomyosis 17%, polyp 11%, malignancy 1%. Ultrasonography showed fibroid in 32% patients, adenomyosis in 17%, endometrial polyp in 11%, thick endometrium in 8%, ovarian cyst in 3% patients. 32 patients were found to have leiomyoma out of which 17 patients had intramural fibroid (53.1%), 10 patients had submucosal fibroid (31.2%), 4 patients had subserosal fibroid (12.5%) and 1 patient had pedunculated fibroid (3.12%). Out of 17 patients with adenomyosis, MRI shows diffuse adenomyosis in 14 patients (82%) and focal adenomyosis in 3 patients (18%). Histopathology findings are proliferative phase followed by Secretary phase, Disordered proliferative, polyp, Chronic endometritis, Simple hyperplasia without atypia, Simple hyperplasia with atypia, Atrophic endometrium, Malignancy are 52%,17%11%,11%,3%,3%,1%,1%,1%.
Conclusion: Prevalence and pattern of AUB varies according to the age, parity and reproductive state of the patient. It can be concluded from the present study that AUB may also lead to undue disruption in daily activities of women, and it may lead to serious medical consequences or may exacerbate anaemia.
Keywords: Abnormal uterine bleeding (AUB), Dysfunctional uterine bleeding (DUB), International federation of obstetrics and gynecology (FIGO).

INTRODUCTION

Abnormal uterine bleeding (AUB) is a broad term that describes irregularities in the menstrual cycle involving frequency, regularity, duration, and volume of flow outside of pregnancy. Up to one-third of women will experience abnormal uterine bleeding in their life, with irregularities most commonly occurring at menarche and perimenopause.[1] A normal menstrual cycle has a frequency of 24 to 38 days and lasts 2 to 7 days, with 5 to 80 milliliters of blood loss. Variations in any of these 4 parameters constitute abnormal uterine bleeding. Older terms such as oligomenorrhea, menorrhagia, and dysfunctional uterine bleeding has been discarded in favor of using simple terms to describe the nature of abnormal uterine bleeding.[1]

Revisions to the terminology were first published in 2007, followed by updates from international federation of obstetrics and gynecology (FIGO) in 2011 and 2018. The FIGO systems first define abnormal uterine bleeding, then give an acronym for common etiologies. These descriptions apply to chronic, non-gestational AUB. In 2018, the committee added intermenstrual bleeding and defined irregular bleeding as outside the 75th percentile.[1] It is proposed that acute AUB is " an episode of bleeding in a women of reproductive age , who is not pregnant, that is of sufficient quantity to

require immediate intervention to prevent further blood loss." "chronic AUB is bleeding from uterine corpus that is abnormal in duration, volume, and/or frequency and has been present for the majority of the last 6 months".[2] In 2007, International federation of obstetrics and gynecology (FIGO) introduced system, with standardized definitions and concise terminology for AUB in non pregnant women. menorrhagia, metrorrhagia, oligomenorrhea were replaced with nomenclature heavy menstrual bleeding (HMB), intermenstrual bleeding, and unscheduled bleeding or breakthrough bleeding (BTB) on hormone medication. The FIGO system 2 provided an useful acronym PALM-COEIN and systematically defines the most common etiologies for AUB with structural PALM and non-structural coein cause of AUB.[3,4] Study in patients with abnormal uterine bleeding in the age group of 36-45 years attending the gynecology outpatient.

MATERIALS AND METHODS

This is a prospective hospital based study carried out in patients with AUB attending the gynaecology outpatient department, teaching hospital & research centre, Hyderabad from july 2022 to may 2024. 100 patients with heavy menstrual bleeding who were eligible and willing to participate were enrolled into the study. Ethical committee approval was taken prior to commencement of this study.

Inclusion Criteria

All patients with heavy menstrual bleeding between the age group of 36-45 years were included in the study.

Exclusion Criteria

Pregnant women below 36 years of age and above the age of 45 years

Known case of chronic diseases, tuberculosis and cancer.

Pregnant women were excluded by doing a sensitive urine or serum pregnancy test which can quickly exclude the possibility that abnormal bleeding relates to a complication of pregnancy. A standard questionnaire including demographic variables and a thorough history regarding their age, parity, marital status, present history , past history, medical history, previous surgical history with regards to D&C , laparoscopy and treatment history, reproductive and gynaecological history, and a detailed menstrual history like regularity, pattern, onset and duration of bleeding, quantity of bleeding, and other associated menstrual complaints, thyroid dysfunction, type 1 or 2 diabetes mellitus, hyperprolactinemia was elicited in each case.

Detailed clinical history taken from the participants in Gynecology OPD. An informed consent was taken from each patient, after which a thorough clinical examination which includes general examination, Checking the pallor, BP, PR, RR. systemic examination, pelvic examination was carried out: the relevant details were recorded. All the patients were subjected to routine investigations like CBP, RBS, ESR, S.TSH, BT, CT to rule out any coagulation defect. After an overnight fasting, venous blood samples were obtained on the second day of spontaneous menstruation for assessment of baseline levels. The following laboratory investigations were done.

RESULTS

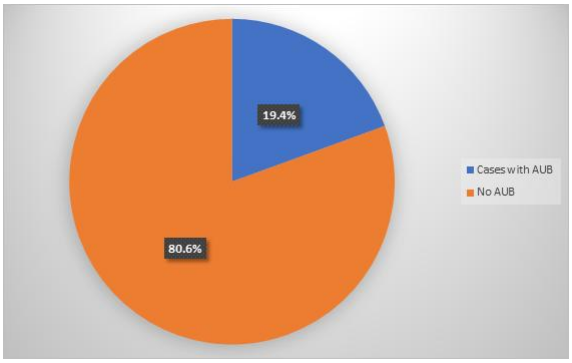

Figure 1: Prevalence of AUB In patients attending Gynaecology outpatient

Total patients attending the gyn OP from the year 2022- 2024 were 12290 out of which 2384 were diagnosed with AUB, the prevalence of patients with AUB attending Gyn op is 19.4%

Table 1: Demographic distribution of AUB cases in the study.

Age Group	Number of Patients	Percentage
36-38	15	15%
39-41	29	29%
42-45	56	56%
Total	100	100%
Parity		
Nulliparous	5	5%
P1	15	15%
P2	40	40%
P3	20	20%
>P3	20	20%
Classification of AUB		
Mild(<6 months)	58	58%
Moderate(6-12 months)	29	29%
High(>12 months)	13	13%

Among 100 patients with AUB 56% were belonging to age group of 42-45, 29% were belonging to 39-41, 15% were in the age group of 36-38. Based on parity, AUB is found to be more with parity 2 in 40% cases, followed by parity of 3 in 20%, parity of >3 in 20%, primi parous in 15% cases, nulliparous in 5% cases. In this study among 100 patients: Duration of bleeding mild (<6months) is found in 58% cases followed by moderate (6-12 months) in 29% followed by High (>12 months) in 13% of cases.

Table 2: Distribution of causes of AUB based on palm-coein classification.

Causes	Number of Patients	Percentage
Polyp	11	11%
Adenomyosis	17	17%
Leiomyoma	32	32%
Malignancy	1	1%
Coagulation disorders	0	0%
Ovulatory dysfunction	20	20%
Endometrial disorder	19	19%
Iatrogenic	0	0%
Not yet classified	0	0%
Total	100	100 %

In this study among 100 patients with AUB, most common cause of AUB found was Leiomyoma 32%, followed by Ovulatory dysfunction 20%, Endometrial disorder 19%, Adenomyosis 17%, polyp 11%, malignancy 1%.

Table 3: Distribution based on different Patterns of AUB(N=100)

Patterns of AUB	Number of patients	Percentage
Heavy menstrual bleeding(Menorrhagia)	65	65%
Inter menstrual bleeding(Metrorrhagia)	17	17%
Frequent menstrual bleeding(Polymenorrhoea)	13	13%
Heavy and prolonged bleeding(Menometrorrhagia)	5	5%
Oligomenorrhea	0	0%
Total	100	100%

In this study, the most common pattern of AUB found was HMB (65%), followed by inter menstrual bleeding 17%, followed by frequent menstrual bleeding 13%, followed by heavy and prolonged menstrual bleeding 5%.

Table 4: Different sonographic, USG and MRI findings of AUB patient.

Sonographic Findings	Number of patients	Percentage
Fibroid	32	32%
Adenomyoma	17	17%
Endometrial polyp	11	11%
Thick Endometrium	8	8%
Ovarian cyst	3	3%
Normal scan	29	29%
USG findings		
Intramural	17	53.1%
Submucosal	10	31.2%
Sub serosal	4	12.5%
Pedunculated	1	3.12%
Total	32	100%
MRI findings		
Diffuse adenomyosis	14	82.35%
Focal adenomyosis	3	17.65%
Total	17	100%

In this study, ultrasonography showed fibroid in 32% patients, adenomyosis in 17%, endometrial polyp in 11%, thick endometrium in 8%, ovarian cyst in 3%. Out of 32 patients with fibroid. USG showed intramural fibroid in 17 patients (53.1%) followed by submucosal fibroid in 10 patients (31.2%), sub serosal fibroid in 4 patients (12.5%) and pedunculated fibroid in 1 patient (3.12%). In this study out of 17 patients with adenomyosis, MRI shows diffuse adenomyosis in 14 patients (82%) and focal adenomyosis in 3 patients (18%)

Table 5: Different histopathology findings in AUB.

Histopathology	Number of patients	Percentage
Proliferative endometrium	52	52%
Secretary endometrium	17	17%
Disordered proliferative	11	11%
Chronic endometritis	3	3%

Atrophic endometrium	1	1%
polyp	11	11%
Simple hyperplasia without atypia	3	3%
Simple hyperplasia with atypia	1	1%
Malignancy	1	1%
Total	100	100%

Among 100 patients studied, most common histopathology findings: proliferative phase followed by Secretary phase, Disordered proliferative, polyp, Chronic endometritis, Simple hyperplasia without atypia, Atrophic endometrium, Simple hyperplasia with atypia, Malignancy are 52%, 17% 11%, 11%, 3%, 3%, 1%, 1%, 1% Respectively.

Table 6: Various treatment for AUB.

Treatment	Number of patients	Percentage
Hysterectomy	48	48%
Dilatation and curettage	21	21%
Polypectomy	7	7%
Myomectomy	6	6%
Cystectomy	0	0
Hormonal management (drugs)	13	13%
Lungs	5	5%
TOTAL	100	100%

In the study, among 100 patients, TAH is done in 48% patients, 21% patients underwent D&C, hormonal treatment is given to 13% patients, followed by polypectomy in 7%, myomectomy in 6% patients and insertion of LNGIUS is done in 5% of patients.

DISCUSSION

This study was undertaken as hospital based prospective study in the patients with AUB attending gynaecology OPD. In this study, prevalence of AUB among the patients attending gynaecology OPD during the study period is 19.4 %. There were 2384 cases of AUB out of total 12290 patients attending the gynaecology OPD in the study period of two years. Similarly, Tabassum Kotagasti et al,[5] in their observational study, found prevalence of AUB as 18.23%. Rajani vaidya et al,[6] in their observational study on prevalence of AUB, also found the prevalence of AUB as 18.3%. Shabbir Ahmed Choudhury, pranoy Nath,[7] found the prevalence of AUB as 20.48% in their observational study on Abnormal uterine bleeding; its prevalence, causes and management in a tertiary care hospital. Sharma A et al,[8] The prevalence varies in each country. In India, prevalence of AUB is reported to be 17.9%

Table 7: Prevalence studies on AUB in indian women

Study	Place/year	Number of AUB cases	Prevalence
Present study	Hyderabad/2024	2384	19.4%
Tabassum k et al[9]	Bangalore/2015	1362	18.23%
Rajani vaidya et al[6]	Kerala/ 2021	2154	18.3%
Shabbir ahmed et al[8]	Assam/2019	2790	20.48%

Coulter A et al,[10] In developing countries, the prevalence of AUB seems to affect around 5-15% of women in their reproductive period and women in older age groups are affected with higher percentage. AUB is one of the major cause of gynaecological morbidity, which can affect 1 out of every 5 women at some point of the reproductive period though the data for prevalence of AUB is very limited. 9-14% of women in reproductive age group have blood loss exceeding 80ml and AUB is a primary indication for hysterectomy, which is the most common major gynaecological operation111 Fraser IS et al,[11] Incidence of AUB is reported to be 9 to 14% in women between menarche and menopause.

In this present study of 100 patients with AUB significantly shows that the incidence of menstrual disorders increases with advancing age. The commonest age group presenting with excessive bleeding in present study was 40 years and above. 42-45 years (56%) 39-41 (29%), 36-38 (15%) respectively. Similar observations were made by Anupma Kumari et al,[12] and found AUB was most common with age group of 40-45years (65.55%), and 46-50 years (27.77%) respectively A similar incidence was reported by Yusuf et al and Muzaffar et al,[14,15] in their study of endometrium. Kajal sinha et al,[15] also reported that with increasing age the incidence of menstrual disorders also increases and excessive bleeding was observed in the age of 40 years and above. In this study, based on parity, AUB is found to be more with parity of 2 (40%) cases, followed by parity of 3 (20%), parity of >3 in (20%), primi parous (15%) cases and nulliparous (5%) cases respectively. Similar observations were made by sreeja P A et al,[16] AUB is found more to be with parity of 2(42.04%)followed by parity 3 (18.1%) respectively.

In previous studies by Shabir Ahmed Choudhury,[7] AUB is found to be more with high parity >3 (38%), followed by parity of 3 (30%). In this study, duration of bleeding; mild (<6 months) is found in 58% cases followed by moderate (6-12 months) in 29% followed by high (>12 months) found in 13% cases. Similarly, Sreeja PA et al,[16] found duration of bleeding in mild 53.4% and moderate 28.4%. Similar study done Shabir ahmed et al,[7] Found duration of bleeding in mild (<6 months) is found in 56% followed by moderate (6-12 months) in 29%. In this study, heavy menstrual bleeding (menorrhagia), was found to be 65% followed by inter menstrual bleeding (metrorrhagia) in 17 %of cases. Similar studies by Radha Nair et al,[17] found heavy menstrual bleeding in 64% followed by intermenstrual bleeding in 18% of cases.

In this study of 100 patients with AUB, the most common cause of AUB found is leiomyoma (32%)followed by ovulatory disorders (20%), endometrial disorders (20%), adenomyosis (17%), polyp (11%) and malignancy (1%) of the cases. Similar studies done by Shabir Ahmed Choudhury, Pranoy Nath[7] In their study, found the most common cause of AUB found is leiomyoma (30%), followed by adenomyosis (21%) and ovulatory disorders (20%), endometrial disorder (19%), endometrial/cervical polyp (8%),malignancy(1%) and not yet classified in 1% of the cases.

In this present study, polyps contribute to AUB in 11 % of cases, similarly, study done by shabir Ahmed Choudhury,[7] also showed that polyps accounted for 8% cases of AUB. Though majority of polyps are asymptomatic, the contribution to AUB varies from 3.7% to 65%. the histopathology of the endometrium showed proliferative phase which indicates their growth is estrogen regulated.

In present study of 100 patients with AUB, 17 women were diagnosed with adenomyosis. Similar to studies done by Shabir Ahmed Choudhury et al,[7] where 21% cases of AUB had adenomyosis and Qureshi et al,[18] where 15 % cases of AUB had adenomyosis. In this study, Out of 17 patients with adenomyosis, MRI showed diffuse adenomyosis in 14 patients (82%) and focal adenomyosis in 3 patients (18%).

Adenomyosis is one of the common cause of AUB between 35-45 years. the cause of AUB in adenomyosis is not clear. Multiparous women had high incidence of adenomyosis with diffuse subtype predominating. Pregnancy might facilitate the formation of adenomyosis by allowing adenomyotic foci to be included in the myometrium due to the invasive nature of the trophoblast on the extension of myometrial fibres. In addition, adenomyotic tissue may have a higher ratio of estrogen receptors and the hormonal milieu of pregnancy may favour the development of islands of ectopic endometrium. According to Tarun et al,[19] 70 to 80% of women undergoing hysterectomy for adenomyosis are in their fourth and fifth decade of life and are multiparous. Betha K et al,[20] Various studies and journals show that multiparous women have higher chances of adenomyosis. Pregnancies leading to formation of endometrium which extend to myometrium. Adenomyotic tissues have more estrogen receptors.

In the present study of 100 patients with AUB, leomyoma was the most predominant cause of AUB. 32 patients were found to have leiomyoma out of which 17 patients had intramural fibroid (53.1%), 10 patients had submucosal fibroid(31.2%), 4 patients had subserosal fibroid(12.5%) and 1 patient had pedunculated fibroid (3.12%). Betha K et al,[20] Incidence of fibroids increases with age. Women with fibroids have heavy bleeding as the surface area of endometrium is increased. Hyperestrogenemia causes endometrial hyperplasia, making it fragile with engorgement of vasculature present in the perimyoma tissue with releasing of many angiogenic factors like vascular endothelial growth factors (VEGF) and platelet derived growth factors, impairing local endometrial haemostasis Position of fibroid decides the pattern of abnormal uterine bleeding. Submucous variety is the least Common types. but they are the tumor sub-group which presents maximum with symptoms. Subserous fibroids are generally asymptomatic and intramural fibroids present variably. Stewart EA et al,[21] Recent theory suggests that complex cellular and molecular changes found in association with fibroids, with effect on angiogenesis change in vasoactive substrates and growth factors as well as change in coagulation can be the pathology of AUB in fibroids in this present study containing 100 patients with AUB, sonographic finding showed leiomyoma in 32% of cases, adenomyosis in 17% of cases, polyp in 11% of cases, thick endometrium in 8% Ovarian cyst in 3% of cases

In my study, most common histopathology pattern of endometrium found is proliferative endometrium (52%) followed by secretory (17%) and disordered proliferative endometrium (11%), chronic endometrietis (3%), atrophic endometrium (1%), simple hyperplasia without atypia(3%), simple hyperplasia with atypia (1%) and malignancy in only 1%. Shabir ahmed pranoy,[7] in their study Also found similar observations endometrial pattern found mostly is proliferative endometrium (43%), followed by secretory (19%) and disordered proliferative endometrium (11%), simple hyperplasia without atypia (3%), simple hyperplasia with atypia (1%) respectively and malignancy in only 1%. Protibha Singh et al,[22] studied and reported similar observations, where they found mostly is proliferative endometrium (23.5%), followed by secretory (18.2%) and disordered proliferative endometrium (15.6%) respectively.

Endometrial hyperplasia without atypia basically represent only exaggerated forms of persistent proliferative endometrium; they regress spontaneously, after curettage or with progestin treatment, and are associated with little risk (1-3%) for progression to adenocarcinoma,37 In contrast, atypical endometrial hyperplasia exhibits an entirely

65 different behavior; it does not often spontaneously regress and can be quite resistant to even repeated curettage or prolonged high-dose progestational therapy. Endometrial hyperplasia with atypia has significant risk (10-30%) of progression to adenocarcinoma if left untreated and must therefore be regarded as a precancerous lesion, Atypical lesions are distinguished from invasive carcinomas by the absence of stromal invasion. As endometrial cancers are common in advancing age groups, the AUB-M was seen in only 1% of cases, similar to Shabir ahmed choudhury et al,[7] where malignancy was also found in 1 % of cases.

Diagnosis with endometrial studies at the earliest stage will help in the prevention and management of premalignant lesions. The incidence of endometrial hyperplasia in this study is less in comparison to other studies Singh P.[22] This may be due to the reason that most of the patients in this part of the country belong to low socioeconomic background and with low instances of associated risk factors like diabetes, obesity and sedentary lifestyle. Other factors may be as many of these patients are diagnosed at an earlier stage in the disordered proliferative phase. In only one case, malignancy was diagnosed following endometrial curettage and histopathological examination and hysterectomy was done accordingly. This is lower as compared to other relevant studies. The difference might be due to low incidence of endometrial malignancy in Indian population as compared to western countries. Although coagulopathies are reported to affect 13 % of women presenting with AUB, the present study had 0 cases similar to Shabir ahmed choudhury et al.[7] Ovulatory dysfunction manifests with unpredictable timing and variable amount of flow and in some instances with HMB. Ovulatory dysfunction was the 2nd most common cause of AUB (20%) in the present study and shabir ahmed et al,[7] also had 20 % of cases . Endometrial cause of AUB is a diagnosis of exclusion. A primary disorder of the endometrium may be due to aberrant prostaglandin synthesis and excessive plasminogen. The endometrial causes of AUB were similar in the present study (20%) and shabir ahmed et al,[7] which is (19%).

In this study, most common treatment given to AUB patients is surgical i.e., hysterectomy (48%) followed by dilatation and curettage (21%), followed by hormonal treatment (drugs) (13%) and polypectomy (7%), myomectomy (6%) and LNGIUS in 5% patients respectively. Astha Saheta et al,[23] in their study found hysterectomy done in 37%, followed by dilatation and curettage in 29%, drugs (hormonal treatment) in 18% and exploratory laparotomy in 16% of cases respectively. Hormonal treatment (drugs): In this present study, hormonal treatment is given to 13% of AUB cases similar to study conducted by Astha saheta et al,[23] where hormonal treatment is also given to 18 % of cases.

Hormonal management is considered the first line of medical therapy for patients with acute AUB without known or suspected bleeding disorders. Treatment options include IV conjugated equine estrogen, combined oral contraceptives (OCs), and oral progestins, LNGIUS, GnRH agonists. Progesterone-only contraceptives: Progestin is the most frequently prescribed medication for heavy menstrual bleeding likely because of its safety in the setting of other medical comorbidities and its efficacy. Therapy with this drug results in a significant reduction in menstrual blood flow when used alone. High-dose oral progestin options (eg, norethindrone 5-15 mg daily, medroxyprogesterone 5-30 mg daily) can be taken day 5 to 26 of the menstrual cycle or continuously and have shown to reduce blood loss by >80%. in contrast to the combined OCPs, low-dose progestin-only pills (POPs) (eg, 0.35 mg norethindrone) typically for contraceptive use are not usually recommended for treatment of heavy menstrual bleeding as they are associated with irregular and unpredictable blood loss. Depo-medroxyprogesterone acetate (DMPA) is an injectable long-acting progesterone, administered as an intramuscular injection, typically given every 12-14 weeks. This can be titrated to more frequent dosing if unfavorable spotting occurs. Levonorgestrel intrauterine system: (LNG IUS) reduces menstrual blood loss by as much as 97%. In this study among 100 patients with AUB, only 5 % of patients opted for insertion of LNGIUS. Gonadotropin-releasing hormone agonists and antagonists106: Most commonly used preoperatively to reduce fibroid volume prior to surgical management.

In this study surgical treatment is the most common treatment given hysterectomy done in 48 % cases, D & C in 21 % patients, polypectomy in 7% patients, and myomectomy in 6 % cases. Similar to study conducted by Astha Saheta et al,[23] in their study found hysterectomy done in 37%, followed by dilatation and curettage in 29% respectively. The need for surgical treatment is based on the clinical stability of the patient, the severity of bleeding, contraindications to medical management, the patient's lack of response to medical management, and the underlying medical condition of the patient. Surgical options include dilation and curettage (D&C), endometrial ablation, uterine artery embolization, and hysterectomy. The choice of surgical modality (eg, D&C versus hysterectomy) is based on the aforementioned factors plus the patient's desire for future fertility.

Specific treatments, such as hysteroscopy with D&C, polypectomy, or myomectomy, may be required if structural abnormalities are suspected as the cause of acute AUB. Dilation and curettage alone (without hysteroscopy) is an inadequate tool for evaluation of uterine disorders and may provide only a temporary reduction in bleeding cycles after the D&C will not be improved.

Dilation and curettage with concomitant hysteroscopy may be of value for those patients in whom intrauterine pathology is suspected or a tissue sample is desired. Case reports of uterine artery

embolization and endometrial ablation show that these procedures successfully control acute AUB. Endometrial ablation, although readily available in most centers, should be considered only if other treatments have been ineffective or are contraindicated, and it should be performed only when a woman does not have plans for future childbearing and when the possibility of endometrial or uterine cancer has been reliably ruled out as the cause of the acute AUB. Hysterectomy, the definitive treatment for controlling heavy bleeding, may be necessary for patients who do not respond to medical therapy.

In developing countries like India, where most of the women do not return for follow up and are non-compliant with hormonal therapy, poor literacy rate, hysterectomy will be the best choice. Removal of uterus is usually psychologically much more acceptable provided the patient has been fully counselled.

CONCLUSION

In this study we conclude that prevalence and pattern of AUB varies according to the age, parity and reproductive state of the patient. It can be concluded from the present study that AUB may also lead to undue disruption in daily activities of women, and it may lead to serious medical consequences or may exacerbate anaemia. Specific diagnosis leading to the cause of AUB and prompt management in early stages can reduce patient's morbidity. After proper classification of AUB by PALM-COEIN, patients can be treated medically or surgically according to the cause leading to better cure and success rate.

The patients presenting with AUB should be comprehensively analyzed including history, clinical examination, USG, and pathological examination. Benign lesions of endometrium and myometrium were the most common causes of AUB in our study.

Future prospective in treatment of AUB includes development of better IUCD with hormone releasing properties having more effect, less bleeding and lesser side effects or molecules similar to OC pills, or vaginal ring releasing low estrogen molecules to be implemented for better compliance and more effect in the treatment of AUB.

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