

Abnormal uterine bleeding in peri-menopausal age: An observational study

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Abstract

Introduction: Abnormal Uterine Bleeding (AUB) is a term which refers to menstrual bleeding of abnormal frequency, duration or quantity. It is a common gynecological complaint accounting one third of outpatient visits to gynecologist. It is caused by wide variety of organic or non-organic causes. The aim of this study was to find out incidence of abnormal uterine bleeding with respect to aetiopathology, age, parity, marital status, treatment options and other medical disorders.

Materials and Methods: This study included prospective study of randomly selected 180 cases of abnormal uterine bleeding between 40–55 years of age during April 2015 to July 2016, in the Dept. of Obstetric & Gynaecology, NMCH, Patna. Details of each patient's were recorded and analysed with respect to aetiopathology, age, parity, marital status, socioeconomic status, treatment options and other medical disorders. Patients were evaluated with menstrual history, physical examination, laboratory tests, imaging studies and histological examinations. Patients were followed up from 3 to 8 months with an average of about 4.5 months.

Results: Most common age group presenting with AUB was 40–45 years (65.55%) and mostly (68.33%) belonged to low socioeconomic status. Most of the women were multiparous and menorrhagia was most common presentation. In 51.66% cases, cause was non-organic (dysfunctional uterine bleeding) and among organic causes fibroid (28.88%) uterus was most common. Bulky uterus was found in 41.11% of cases and 43.33% had proliferative endometrium. Majority of patients had mild anemia. Maximum number of patients (70.55%) were treated surgically and 27.77% got medical treatment.

Conclusion: Abnormal uterine bleeding (AUB) is a common gynecological complaint associated with considerable morbidity and significantly affects the patient's family, personal and social life. Perimenopausal women's health and quality of life can be maintained and improved through preventive care, life style modification, early diagnosis of risk factor or disease and appropriate treatment.

Keywords: Abnormal uterine bleeding, Perimenopausal women, Endometrium.

Introduction

Perimenopausal age of a women's life is still an enigma. In 2001, Stages of reproductive aging workshop (STRAW) defined perimenopause as the beginning with menopausal transition and ending 12 months after the last menstrual period. It is associated with menstrual and endocrinal alteration and may lasts for many years (2 to 8 years).¹ It can be associated with a wide spectrum of disorders, but very little research has been done on this subject.

Abnormal uterine bleeding is one of the most common health problem encountered by women of perimenopausal age group. It accounts for two-thirds of all hysterectomies worldwide, thereby a great cause of morbidity and mortality in this age group.² It accounts for about 5-10% of cases in the outpatient clinic setting. About 20% of affected individuals are in the adolescent age group, and 50% of affected individuals are aged 40-50 years.³ If the treatment is not instituted early, it can lead to severe anemia. If blood loss is acute, it can result in hypovolemic shock and the patient may collapse if the bleeding is too severe.

The most common cause of AUB is dysfunctional uterine bleeding (DUB) which has no any detectable organic cause. It is usually due to hormonal disturbances: reduced level of progesterone causes low

levels of prostaglandin F₂alpha and cause menorrhagia (abnormally heavy flow); increased levels of tissue plasminogen activator (a fibrinolytic enzyme) lead to more fibrinolysis. Organic causes of AUB includes benign pelvic lesion (fibroid, adenomyosis, cervical and endometrial polyp, tuberculosis), infection, trauma, iatrogenic (hormonal replacement therapy, contractive use, anticoagulant therapy), malignancy of cervix, endometrium or ovary, systemic illness (hypertension, diabetes mellitus, thyroid disorders), etc. AUB can be classified as ovulatory or anovulatory, depending on whether ovulation is occurring or not.⁴

The investigation of a patient with AUB in perimenopausal age begins only after thorough history, general physical examination and systemic evaluation. Apart from routine investigations, PAP smear, saline infusion salpingography, endometrial sampling, pelvic ultrasound and hysteroscopy should be done routinely. Hysteroscopy combined with guided biopsy has been considered as gold standard in the evaluation of AUB. Ultrasound is a safe initial investigation in the management of abnormal uterine bleeding as it is a noninvasive procedure for the detection of endometrial pathology. Dilatation and Curettage (D and C) is the mainstay of endometrial sampling since a long time.^{2,5}

Once malignancy and significant pelvic pathology have been ruled out, medical treatment is an effective first line therapeutic option for abnormal uterine bleeding. Medical treatment tailored to the individual woman's therapeutic goals, desire for contraception, underlying medical conditions, and tolerance of side effects will encourage compliance and maximize the likelihood of treatment success. Effective medical treatment options include Non-hormonal (Non-steroidal anti-inflammatory drugs, Antifibrinolytics) and Hormonal (Combined hormonal contraceptives, Levonorgestrel-releasing intrauterine system, Oral progestins (long phase, days 5 to 26), Depot-medroxyprogesterone acetate, Danazol, GnRH-agonists).⁶

Improvement in quality of life is the ultimate goal of treatment and may occur through achieving eumenorrhea or amenorrhea. Surgical options for managing AUB depend on several factors including the patient's expectations and uterine pathology. Surgical options include dilation and uterine curettage, hysteroscopic polypectomy, endometrial ablation, myomectomy, and hysterectomy.⁶

Materials and Methods

This prospective observational study of 180 cases of abnormal uterine bleeding between 40-55 years of age, attended to OPD & Gynae emergency was conducted during April 2015 to July 2016, in the Dept. of Obstetric & Gynaecology, NMCH, Patna. Hospital ethical committee approval was obtained to conduct the study and a valid written consent was taken from all the cases. A detailed history was taken and a thorough clinical examination was done, complemented by relevant investigation as required for the study. All the data were duly recorded in the standard prepared proforma. Details of each patient's were recorded and analysed with respect to aetiopathology, age, parity, marital status, socioeconomic status, treatment options and other medical disorders. All perimenopausal (40 to 55 year) women presenting with abnormal uterine bleeding were included and women with active or recent pelvic inflammatory disease, patient in menstruation phase, pregnancy or suspected pregnancy complications and cervical stenosis were excluded from the study. Patients were followed up from 3 to 8 months with an average of about 4.5 months.

Observation and Results

In our observational study, randomly selected 180 patients, who attended to Gynae. OPD and emergency during study period, were studied.

Out of 180 patients studied, 118 (65.55%) cases were in the age group of 40 to 45 years followed by 50 (27.77%) cases in 46 to 50 years and 12 (6.66%) in 51 to 55 years of age. Majority (n=136, 75.55%) of patients were Hindu, 31 (17.22%) were Muslim and 13 (7.22%) belonged to other religions. 123 (68.33%)

cases belonged to low socioeconomic status, 46 (25.55%) to middle and 11(6.11%) to high class.

Table 1: Age distribution of AUB cases

Age Group (years)	No. of Cases	Percentage (%)
40-45	118	65.55
46-50	50	27.77
51-55	12	6.66

It is evident from our study that AUB was much more common in multiparus women than in nulliparus. Out of 180 cases, 173 (96.11%) belonged to para 1 and above, and among these, AUB was more common in para 1-3 (71.11%). 177 (98.33%) patients were married while 3 were unmarried. 149 (82.77%) cases reported within 1 year, 22 (12.22%) between 1 to 2 year and 9 (5%) after 2 years of suffering.

Table 2: Distribution of cases according to parity.

Parity	No. of Cases	Percentage (%)
Para 0	7	3.88
Para 1-3	128	71.11
Para 4 & above	45	25

In the present study, no organic cause could be found in 93 (51.66%) cases and were labeled as DUB after proper investigation. Organic causes were found in 87 (48.33%) cases. Among organic causes, uterine fibroid was seen in 52 (28.88%) cases, adenomyosis in 7 (3.88%), pelvic inflammatory disease (PID) in 6 (3.33%), endometriosis in 5 (2.77%), H. mole in 3 (1.66%) and endometrial carcinoma in 2 (1.11%) cases. Rest of the causes attributed only 6 to 7% of cases. 2 cases of carcinoma cervix were found which were multiparous, belonging to Hindu religion and low socioeconomic status. Both cases of endometrial carcinoma were obese, and having type 2 diabetes mellitus and hypertension. 2 cases of AUB had associated hypothyroidism.

Table 3: Aetiology of various organic causes

Aetiology	No. of Cases	Percentage (%)
Fibroid	52	28.88
Adenomyosis	7	3.88
Pelvic inflammatory disease	6	3.33
Endometriosis	5	2.77
H. mole	3	1.66
Endometrial carcinoma	2	1.11
Cervical carcinoma	2	1.11
Cervical polyp	2	1.11
Endometrial ploy	2	1.11
Hypothyroidism	2	1.11
Tuberculous endometritis	2	1.11
Ovarian tumour	1	0.55
IUCD	1	0.55

It was observed that commonest bleeding pattern in our series was menorrhagia (43.88%). Metrorrhagia accounted for 28.88% of cases. Polymenorrhoea and polymenorrhagia were seen in 33 (18.33%) and 14 (7.77%) cases respectfully.

Table 4: Pattern of various menstrual irregularities in AUB cases

Bleeding pattern	No. of Cases	Percentage (%)
Menorrhagia	79	43.88
Metrorrhagia	52	28.88
Polymenorrhoea	33	18.33
Polymenorrhagia	14	7.777
Continuous bleeding	2	1.11

Maximum number of patients (53.33%) in this study had mild anaemia with haemoglobin 10 to 10.9 gm%. 43 (23.88%) cases were having acceptable level of haemoglobin. Moderate degree anaemia was present in 29 (16.11%) cases and 12 (6.66%) case had severe anaemia.

Table 5: Association of anemia in AUB

Hb in gm%	No. of Cases	Percentage (%)
> Hb in	43	23.88
10-10.9	96	53.33
7-9.9	29	16.11
<7.0	12	6.66

Clinical examination in our study revealed bulky uterus in 74 (41.11%) cases and cystic ovaries in 42 (23.33%) cases. These findings were frequently seen in patients with menorrhagia.

Histopathological examination of endometrium obtained from diagnostic curettage as well as from hysterectomy specimen revealed proliferative endometrium in 78 (43.33%) cases and secretory in 51 (28.33%). In 38 (21.11%) cases, endometrium was hyperplastic and in 4 (2.22%) cases, endometrium had irregular shedding. Atrophic endometrium was found in 3 (1.66%) and in 2 (1.11%) cases endometrial carcinoma was detected.

Table 6: Endometrial pattern in AUB cases

Endometrial pattern	No of cases	Percentage (%)
Proliferative	78	43.33
Secretory	51	28.33
Hyperplastic	38	21.11
Irregular shedding	4	2.22
Atrophic	3	1.66
Endometrial polyp	2	1.11
Endometrial carcinoma	2	1.11
TB endometritis	2	1.11

Majority of cases (n=127, 70.55%) in our study treated surgically out of which 124 cases undergone hysterectomy. 2 patients undergone polypectomy & diagnostic curettage, and 1 patient undergone dilatation & curettage. Wertheim's hysterectomy was done in both cases of carcinoma cervix and extended hysterectomy in both cases of endometrial carcinoma. One case of DUB was treated by Ward Mayo operation because she had associated 2° uterovaginal prolapsed. 50 (27.77%) patients were treated with drugs depending on the cause of AUB and only 3 patients managed with reassurance, symptomatic relief and haematinics.

Discussion

A regular menstruation has always been accepted as an indication of good reproductive health. A change in the amount, duration or regularity of this periodic loss is therefore regarded as something going wrong and not accepted by any women especially in the perimenopausal age.

In the present study, 180 women of perimenopausal age with abnormal uterine bleeding were studied. Majority (n=136, 75.55%) of patients were Hindu, 31 (17.22%) were Muslim and 13 (7.22%) belonged to other religions. 123 (68.33%) cases belonged to low socioeconomic status, 46 (25.55%) to middle and 11 (6.11%) to high class. This appeared to be due to the fact that majority of patients were from lower class families. Affluent classes usually go to private clinic.

In this study, maximum number (n=118, 65.55%) of AUB cases were in the age group of 40 to 45 years followed by 50 (27.77%) cases in 46 to 50 years and 12 (6.66%) in 51 to 55 years of age. This finding varied with M. B. Swami et al. study which showed 53.60% cases in the age group of 40 to 45 years and 22.40% cases in 46 to 50 years of age.⁷ In their study, Urvasi Verma et al. showed 38% cases in the age group of 40-43 years, 41% in 44-47 years and 21% in 48-51 years.⁸

149 (82.77%) cases reported within 1 year, 22 (12.22%) between 1 to 2 year and 9 (5%) after 2 years of suffering. This disparity may be due to ignorance and poor literacy rate in our population.

It is evident from our study that AUB is much more common in multiparous women than in nulliparous. Out of 180 cases, 173 (96.11%) belonged to para 1 and above, and among these, AUB was more common in para 1-3 (71.11%). This finding is comparable to the Kumar Suneet study which found 98% cases of AUB were multipara and 44% cases in para 1-3.⁹ However, Singh A et al. study showed that 92% cases of AUB were multipara and 8% were nullipara.¹⁰

In the present study, no organic cause could be found in 93 (51.66%) cases and were labeled as DUB. Organic causes were found in 87 (48.33%) cases. Among organic causes, uterine fibroid was most common cause, seen in 52 (28.88%) cases followed by

adenomyosis (n=7, 3.88%). Other causes of AUB included pelvic inflammatory disease (n=6, 3.33%), endometriosis (n=5, 2.77%), H. mole (n=3, 1.66%) and endometrial carcinoma (n=2, 1.11%). Katke RD CC et al. showed that 43.9% patients were having fibroid as associated pathology on Ultrasound.¹¹ Purandre et al. (1993) in a series of 518 patients observed organic pathology in 37% of the cases and 63% patients were having without any organic pathology. Their study was mainly on cases of DUB but our study is based on all cases of AUB. So, in our study incidence of organic causes is more. Diachman & Mackles (1965) and Chaudhary et al. (1981) also found that majority of perimenopausal cases with AUB had no organic pathology. This is probably due to alteration in Hypothalamic-Pituitary-Ovarian function preceding menopause.

It was observed that commonest bleeding pattern in our series was menorrhagia (n=79, 43.88%). Metrorrhagia accounted for 28.88% of cases. Polymenorrhoea and polymenorrhagia were seen in 33 (18.33%) and 14 (7.77%) cases respectfully. Katke RD CC et al. also found menorrhagia as the commonest pattern of AUB in perimenopausal age, occurring in 74.24% of cases. Other pattern of AUB they found are polymenorrhagia (10.60%), metrorrhagia (6.06%) and poly-menorrhoea (4.50%).¹¹ Our observation correlates well to the findings of Sharma et al. (1991) and Bidye et al. (1993) studies. They observed that maximum number of AUB cases were of menorrhagia. Kotagasti et al. study found menorrhagia (33%) as the commonest bleeding pattern in AUB, followed by oligomenorrhoea (19.97%) and polymenorrhoea (18.35%).¹²

Maximum number of patients (n=96, 53.33%) in this study had mild anaemia with haemoglobin 10 to 10.9 gm%. 43 (23.88%) cases were having acceptable level of haemoglobin. Moderate degree anaemia was present in 29 (16.11%) cases and 12 (6.66%) case had severe anaemia. Bidya (1993) and Gahlot et al. (1993) showed 34% and 88.64% cases of AUB having mild anaemia respectfully. Nahid Sultana et al. showed that about 60% patients had hemoglobin level less than 50% and only 20% patients had hemoglobin level more than 60%.¹³

Clinical examination in our study revealed bulky uterus in 74 (41.11%) cases and cystic ovaries in 42 (23.33%) cases. Nahid Sultana et al. showed that 72% cases of DUB had bulky uterus and 18% patients had cystic ovary.¹³

Histopathological examination of endometrium in our study revealed proliferative endometrium in 78 (43.33%) cases and secretory in 51 (28.33%). In 38 (21.11%) cases, endometrium was hyperplastic and in 4 (2.22%) cases endometrium had irregular shedding. Atrophic endometrium was found in 3 (1.66%) and in 2 (1.11%) cases endometrial carcinoma was detected. Katke RD et al. showed proliferative endometrium in 46.90% cases, secretory in 40.90%, hyperplastic in

6.00%, irregular shedding in 1.50% and atrophic in 1.66% cases of AUB in perimenopausal women.¹¹ Kumar Suneet study showed proliferative endometrium in 36% cases, secretory in 24%, hyperplastic in 16.00% and atrophic in 14% cases.⁹

In our study, majority of cases (n=127, 70.55%) of AUB were treated surgically out of which 124 cases undergone hysterectomy. 2 patients undergone polypectomy & diagnostic curettage, and 1 patient undergone dilatation & curettage. Wertheim's hysterectomy was done in both cases of carcinoma cervix and extended hysterectomy in both cases of endometrial carcinoma. After surgical treatment, carcinoma cervix cases were referred to oncology department for further management. One case of DUB was treated by Ward Mayo operation because she had associated 2° uterovaginal prolapsed. 50 (27.77%) patients were treated with drugs depending on the cause of AUB and 3 patients were managed on expectant line with only reassurance, symptomatic relief and haematinics. Reich H et al. showed that hysterectomy is the definitive treatment for DUB and has a higher rate of patient satisfaction.¹⁴ 50% rate of hysterectomy was reported by Gath et al. (1987) in the management of perimenopausal DUB.

In developing countries like ours, where most of the women do not return for follow up and are not dependant for hormonal therapy, hysterectomy will be the best choice (Ratnam, 2001). Removal of uterus is usually psychologically much more acceptable provided the patient has been fully consulted and counseled.

Conclusion

Although perimenopause is largely unstudied, many therapeutic approaches to the management of perimenopausal disturbances exist, both prescription and non-prescription. The perimenopausal women's health and quality of life can be maintained & improved through preventive care, lifestyle modification, early diagnosis of disease or increased risk for disease and intervention when appropriate. AUB may be due to malignancy of genital tracts. Our clinical goal should be to optimize the women health during and after perimenopause.

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