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Original Research Article

Study of endometrial pathology in women with abnormal uterine bleeding

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ABSTRACT

Background: Abnormal uterine bleeding is one of the most common complaint that reproductive age women bring to their clinicians. Causes are varied and study of endometrium by dilatation and curettage with histopathological examination is an important aspect of treating patients with Abnormal uterine bleeding (AUB). The present study was done for evaluation of the histopathology of the endometrium for identifying endometrial causes of AUB.
Methods: A prospective study was conducted over a period of one year from July 2017 to July 2018 in the department of Obstetrics and Gynaecology in collaboration with the department of Pathology at Aarupadai Veedu Medical College, Puducherry. A complete clinical history, complete clinical examination, laboratory investigations, pelvic scan and endometrial biopsy were done to diagnose causes of AUB.
Results: A total of 152 cases are included. The age of the patients having AUB was ranging from 21 to 70 years. AUB was more common the age group in the age group 41-50 years (49%) followed by 31-40 years (36%). Majority were multiparous (74%). Menorrhagia (61%) was the commonest presentation. Majority of the cases showed a disordered proliferative endometrial pattern (34.2%), followed by secretory pattern (25%). 9.8% had polyp and 1.3% showed simple hyperplasia and 0.62% revealed complex hyperplasia without atypia and carcinoma endometrium.
Conclusions: Abnormal uterine bleeding was more common in the perimenopausal age group and majority had disordered proliferative endometrium and secretory changes. Endometrial sampling followed by histopathological examination helps us to diagnose the underlying pathology and will help in treating the patients appropriately including ruling out premalignant and malignant conditions of the uterus.

Keywords: Abnormal uterine bleeding, Endometrium, Dilation and curettage

INTRODUCTION

Abnormal uterine bleeding is the single most common complaint that reproductive age women bring to the clinicians. It is the organized sequence of endocrine signals in an ovulatory cycle that gives menstruatory predictability and consistency. However, anovulation produces an unpredictable and disorganised pattern of ovarian steroid hormone synthesis resulting in a disordered pattern of endometrium.[1] AUB is bleeding that does not fall into the normal range of amount, frequency, duration and cyclicity of the normal pattern of menstrual cycle.[2] Clinical management and education of medical personal, the design and interpretation of clinical trials have been hampered by absence of a consensus system of classification of AUB. To address this issue FIGO designed the PALM COEIN in 2011.There are nine main categories which are arranged according to the acronym PALM COEIN, Polyp, Adenomyosis, Leiomyomas, Malignancy, Coagulopathy, Ovulatory dysfunction, Endometrial, iatrogenic and not yet classified.[3] The study of endometrial pattern by histopathological examination

of endometrial curettings by dilatation and curettage guides the clinician for further management of patients with AUB. In addition, it helps to rule out ominous pathology like endometrial hyperplasia and endometrial carcinoma which is on the rising trend in recent times.[4] Various studies on endometrial pattern has been conducted throughout the past years with various patterns of endometrium like secretory, proliferative, disordered proliferative, atrophic, endometritis, endometrial hyperplasia and endometrial carcinoma being commonly seen.

However, with the changes in life style, increasing risk factors there is a rising incidence of AUB and people being more aware of the need to seek treatment for AUB. We attempted to study the different pathologies associated with AUB by endometrial biopsy with dilatation and curettage which offers a sensitivity of 90% in detecting endometrial abnormalities.[5]

METHODS

This is a prospective cross-sectional study done on patients who presented with AUB in the Department of Obstetrics and Gynaecology in collaboration with the Department of Pathology from July 2017 to July2018, after obtaining Institutional Research and Ethical Committee clearance. 152 consecutive AUB patients were enrolled in present study between the age group of 21-70 years after getting informed and written consent. Patients with isolated endometrial pathologies were only included in present study. Those with pregnancy related bleeding, leiomyomas, bleeding disorders, isolated cervical or and vaginal pathologies with bleeding, medical conditions such as thyroid dysfunctions, liver or and renal disorders and those on exogenous hormones, contraception were excluded by history, examination and investigations. A structured proforma with regard to age, parity, menstrual pattern, general and pelvic examination with appropriate investigations to rule out other causes of bleeding including pelvic ultrasonography was performed. Those patients fulfilling the inclusion criteria of having isolated endometrial pathologies were subjected to dilatation and curettage and the specimen was transported in 10% formalin to the pathology laboratory. 4-6 microns thick paraffin embedded sections were taken and stained with Hematoxylin and Eosin (H and E). The slides were studies by pathologists. Data collected and tabulated in Microsoft Excel. The percentages were calculated for comparison of results.

RESULTS

Total of 152 patients with AUB were included in this study. 74 patients belonged to the age group of 41-50 years (49%), followed by 55 patients (36%) in age group 31-40 years. 9 patients (6%) belonged to 21-30 years and 14 patients (9%) in the age group of more than 50 years (Table 1).

Table 1: Age-wise distribution of AUB.

Age- category	Total	Percentage
21-30 years	9	6
31-40years	55	36
41-50years	74	49
>50yeas	14	9
Grand total	152	100

The commonest menstrual abnormality was menorrhagia seen in 94 patients (61%) followed by menometrorrhagia in 44 patients (30%) and postmenopausal bleeding in 14 patients (9%) (Table 2).

Table 2: Clinical presentation of AUB.

Menstrual History	Total no of cases	Percentage
Menometrorrhagia	44	30
Menorrhagia	94	61
Post-menopausal bleeding	14	9
Grand total	152	100

Histopathological examination revealed maximum cases of disordered proliferative endometrium 52 (34.2%) followed by secretory endometrium 38 (25%), proliferative endometrium in 24 patients (15.7%), endometrial polyp in 15 cases (9.8%), chronic endometritis in 7 patients (4.6%), pill endometrium in 5patients (3.2%), simple hyperplasia in 2 (1.3%), complex hyperplasia without atypia in 1 (0.6%) and one case (0.6%) of well differentiated endometrial adenocarcinoma (Table 3).

Table 3: Distribution of cases depending on histopathology.

HPE	Total	Percentage
Disordered proliferative endometrium	52	34.21
Secretory endometrium	38	25
Proliferative endometrium	24	15.79
Pill endometrium	5	3.29
Chronic endometritis	7	4.61
Benign endometrial polyp	15	9.87
Atrophic endometrium	7	4.61
Simple hyperplasia	2	1.32
Complex hyperplasia without atypia	1	0.65
Well differentiated endometrial adenocarcinoma	1	0.65
Grand total	152	100

With regards to parity most of the patients with complaints of AUB were multiparous 112 (74%) followed by grand multiparas 23 (15%), primipara were 13 (8.4%) while nulliparas were 4 (3%) out of 152 cases (Table 4).

Table 4: Parity and AUB.

Parity	Total	Percentage
Nulliparous	4	3
Primiparous	13	8
Multiparous	112	74
Grand multiparous	23	15
Grand Total	152	100

Maximum number of disordered proliferative endometrium were seen in 41-50 years (23 cases), while secretory endometriums seen in 19cases which was maximum in the among the 31-40-year olds. Other abnormalities were also seen among the 41-50 years old group in the highest number, while 21-30-year age group had the least number of endometrial pathologies (Table 5).

Table 5: Age wise distribution of AUB based on endometrial lesion.

HPE	21-30 years	31-40 years	41-50 years	>50 years	Grand Total
Atrophic endometrium	-	-	4	3	7
Benign endometrial polyp	-	4	9	2	15
Chronic endometritis	-	3	3	1	7
Complex hyperplasia without atypia	-	-	1	-	1
Disordered proliferative endometrium	6	20	23	3	52
Pill endometrium	-	1	4		5
Proliferative endometrium	2	8	11	3	24
Secretory endometrium	1	19	17	1	38
Simple hyperplasia	-	-	2	-	2
Well differentiated endometriod adenocarcinoma	-	-	-	1	1
Grand Total	9	55	74	14	152

Table 6: Age wise distribution of AUB and menstrual history.

Menstrual History	21-30 years	31-40 years	41-50 years	>50 years	Grand Total
Menometrorrhagia	3	14	27		44
Menorrhagia	6	41	44	3	94
Postmenopausal bleeding			3	11	14
Grand Total	9	55	74	14	152

Menorrhagia was commonest in the age group of 41-50 years, menometrorrhagia and post-menopausal bleeding were seen in 11 cases among the age group above 50 years (Table 6).

DISCUSSION

AUB is a deviation from the normal menstrual cycle in terms of frequency, cyclicity, amount and duration. AUB has many underlying causes but isolated endometrial pathology is detected by sampling of the endometrium. The sensitivity of detecting endometrial abnormality by dilatation and curettage is reported to be as high as 96%.[5]

The highest number of cases in present study belonged to 40-50 years age group 74/152 (49%) this compares to the studies done by Jignasha et al (33%), Radhika G (42.6%), Usha Devi et al (54%).[6-8] The reason may be perimenopausal depletion of ovarian follicles with infrequent ovulation leading to prolonged and excessive bleeding from thickened endometrium in the absence of progesterone. Commonest menstrual pattern was menorrhagia 94/152 (61%) followed by menometrorrhagia 44/152 (30%) and least were postmenopausal bleeding. Similar findings were seen in studies by Agith et al 83/152 (51.86%) and Lithingo (49%).[9,10] Endometrial pathology showing disordered proliferative endometrium was observed in 34.2% cases, secretory endometrium in 25%, these figures were similar to studies done by Gignasha et al in which 102 (34%) cases had disordered proliferative endometrium and 32% were secretory.[6] Disordered proliferative endometrium is a type of focal hyperplasia which lies in between the spectrum of proliferative endometrium on one hand and hyperplasia at the other end. Secretory pattern was observed in 25% of cases, this was comparable to the studies by Saraswathi et al (28%) and Abid et al (21%).[11,12] Endometritis was seen in 4.6% however studies by Malathi et al reported 2.1%.[13] Polyps were observed in 9.8% which is comparable to Gulia et al with 10% from 435 cases.[14] Present study showed 1.9% cases of endometrial hyperplasia unlike studies by Radhika et al which had 18%, the reason could be as majority of our patients belonged to the low socioeconomic strata where risk factors for hyperplasia and carcinoma endometrium

such as obesity, nulliparity and late menopause are less prevalent.[7] Atrophic endometrium as seen in 4.6% unlike Shah et al who reported 1.1%.[15] Carcinoma endometrium was seen in 0.6% while Abid et al had an incidence of less than 2%.[12]

CONCLUSION

An attempt was made to study the different patterns of endometrium in patients presenting with AUB which provides the diagnosis and basis for further evaluation and treatment. Dilatation and curettage are almost the easiest procedure to detect the causes of AUB especially precancerous lesions and malignancy itself especially in the perimenopausal and postmenopausal patients.

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