

Clinico-Pathological Variations in Patients of Abnormal Uterine Bleeding: A Prospective Study.

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ABSTRACT

Background: Abnormal Uterine Bleeding (AUB) is one of the commonest and challenging anomalies found in women irrespective of age throughout the world. Any bleeding which is profuse in quantity and does not match to regular frequency and criteria of normal menses is considered as AUB. The endometrium is capable of proliferation, breakdown, regeneration and differentiation in each and every menstrual cycle throughout the reproductive life. The diagnosis of AUB can be made accurately via histopathological examination of the endometrial tissue for the exact choice of treatment. Therefore, the present study was designed to determine different pathologies via analysis of endothelium histopathological pattern in AUB women. **Methods:** This was a prospective type of study conducted in the department of obstetrics and gynecology, in a tertiary care institute from July 2016 to June 2017. Total two hundred fifty patients above 18 years of age with AUB were recruited from the gynecology OPD of the institute. The population of the study was divided into four groups group I (≤ 30 years), group II (31 to 40 years), group III (41 to 50 years) and group IV (>50 years). Ultrasonography, physical examination and endometrial biopsy were done of all the AUB patients. All the patients were treated with conservative treatment or surgery as per bleeding, the severity of symptoms and age of the patients. **Result:** Finding of the present study showed an incident of AUB was increased with the parity of women. Maximum 105 patient of 3 or more parity and minimum 14 patients of null parity were among 250 patients. Main presenting complaints among AUB patients were in a decreasing order Menorrhagia 40.8%, Polymenorrhagia 16%, Menometrorrhagia 10.8%, Polymenorrhoea 10.4%, Continuous bleeding 9.6%, Post menopausal bleeding 8.4% and Metrorrhagia 4%. The commonest pathology diagnosed among AUB patients was endometrial hyperplasia 16%. **Conclusion:** Findings of the present study suggest that there is a broad spectrum in variations of endometrium from normal to malignancy in AUB patients. Further, our study strongly suggests that premenopausal and menopausal women with AUB are threaded to malignancy and biopsy of the endometrium is unavoidable in the patients of above 41 years age group suffering from AUB.

Keywords: Abnormal Uterine Bleeding, Histopathology.

INTRODUCTION

Abnormal Uterine Bleeding (AUB) is one of the commonest and challenging anomalies found in women irrespective of age throughout the world.^[1] Any bleeding which is profuse in quantity and does not match to regular frequency and criteria of normal menses is considered as AUB.^[2] The endometrium is capable of proliferation, breakdown, regeneration and differentiation in each and every menstrual cycle throughout the reproductive life.^[3] Various physiological or pathological causes may lead to AUB. However, aetiology of AUB can be divided into two main categories (A) more than 20% cases may be caused diverse factors including benign or

malignant fibroids, pelvis inflammatory disease (PID), systemic disorders, complications of pregnancy and hormonal disbalance; (B) Less than 80% of menorrhagia may be caused by an ovulation and known as dysfunctional uterine bleeding (DUB).^[3,4]

The transition phase of fertile to infertile or menopause transitional is known as perimenopause which is associated with scanty or profuse menstruation along with irregular ovarian cycle. Exclusion of endometrial hyperplasia in young, premenopausal and menopausal women with AUB can be made via endometrial biopsy or curettage.^[5] The diagnosis of AUB can be made accurately via histopathological examination of the endometrial tissue for the exact choice of treatment.^[6] Therefore, the present study was designed to determine different pathologies via analysis of endothelium histopathological pattern in AUB women.

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MATERIALS AND METHODS

This was a prospective type of study conducted in the department of obstetrics and gynecology, in a tertiary care institute from July 2016 to June 2017. Total two hundred fifty patients above 18 years of age with AUB were recruited from the gynecology OPD of the institute. Exclusion criteria for the study were endometriosis, uterine polyp, adenomyosis, PID, thyroid disorder and coagulation disorder. The population of the study was divided into four groups group I (≤ 30 years), group II (31 to 40 years), group III (41 to 50 years) and group IV (>50 years). All the participants of the study gave informed written consent before they participated in the study. After the recruitment for the study, every participant gave the detailed history. Ultrasonography, physical examination and endometrial biopsy were done of all the AUB patients. All the patients were treated with conservative treatment or surgery as per the bleeding severity of symptoms and age of the patients.

Statistical analysis

All the statistical analysis of the study was done by using SPSS software. Further, Chi square test goodness to fit test was used to compare categorical data of different groups.

RESULTS

Finding of the present study shows that among total two hundred fifty AUB women group I (14), group II (87), group III (124) and group IV (25) women were suffering from AUB. (Fig. 1) Further, it is evident from figure 2 that incident of AUB is increased with the parity of women. Maximum 105 patient of 3 or more parity and minimum 14 patients of null parity were among 250 patients.

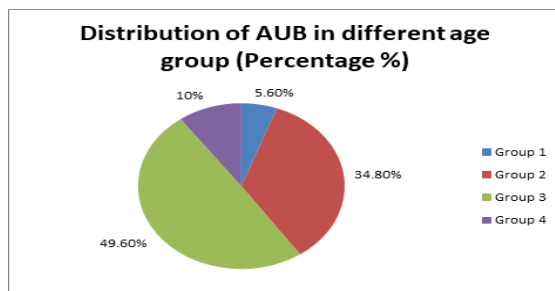


Figure 1: Distribution of AUB in different age groups.

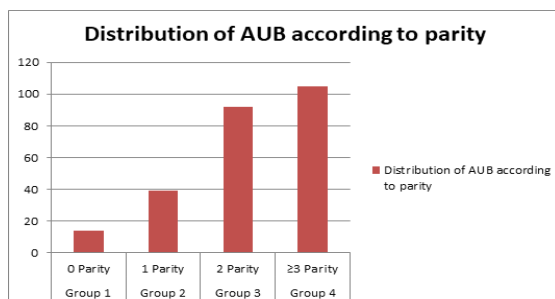


Figure 2: Distribution AUB according to the parity of patients.

[Table 1] shows that main presenting complaints among AUB patients were in a decreasing order Menorrhagia 40.8%, Polymenorrhagia 16%, Menometrorrhagia 10.8%, Polymenorrhoea 10.4%, Continuous bleeding 9.6%, Post menopausal bleeding 8.4% and Metorrhagia 4%.

Table 1: Distribution of bleeding pattern according to age groups

Pattern of bleeding	≤ 30 Years	31-40 Years	41-50 Years	>51 Years	Total
Menorrhagia	4	38	58	2	102 (40.8%)
Menometrorrhagia	1	9	17	0	27 (10.8%)
Post menopausal bleeding	0	0	7	14	21 (8.4%)
Continuous bleeding	2	8	12	2	24 (9.6%)
Polymenorrhagia	2	17	20	1	40 (16%)
Metorrhagia	0	0	4	6	10 (4%)
Polymenorrhoea	5	15	6	0	26 (10.4%)
Total	14	87	124	25	250

[Table 2] shows difference pattern of endometrium in patients with AUB. It is evident from table 2 that maximum patients were having normal menstrual phase proliferative endometrium (33.6%) and secretory phase endometrium (27.2%). Further altered endometrium was observed in endometrial hyperplasia (16%), simplex hyperplasia (10.4%), complex hyperplasia (3.2%) and complex hyperplasia with atypia (3.2%). Moreover, results revealed that endometrial carcinoma was found in 1.6% patients.

Table 2: Difference pattern of endometrium in patients with AUB.

Endometria histology	≤ 30 Years	31-40 Years	41-50 Years	>51 Years	Total
Proliferative	7	35	40	2	84 (33.6%)
Secretory	3	32	31	2	68 (27.2%)
Atrophy	1	1	3	1	6 (2.4%)
Disordered proliferative endometriom	2	1	5	0	8 (3.2%)
Simplex	0	7	17	2	26 (10.4%)
Complex	0	0	6	2	8 (3.2%)
Complex with atypia	0	1	3	0	4 (1.6%)
Chronic endometritis	1	2	0	0	3 (1.2%)
Endometrial hyperplasia	0	8	18	14	40 (16%)
Endometrial carcinoma	0	0	1	2	3 (1.6%)
Total	14	87	124	25	250

[Table 3] shows that all the group I patients (100%) received conservative treatment. Whereas 72.41% patients of group II were treated with conservative treatment and 17.9% were operated. Maximum numbers of patients (79.04%) were treated via surgery while 20.96% of patients were conservatively treated. Out of 25 patients, 22 patients were operated and 3 were conservatively treated.

Table 3: Management of AUB in different age groups.

Age group	No. of cases	Conservative treatment	Surgery
≤ 30 Years	14	14 (100%)	0
31-40 Years	87	63 (72.41%)	24 (17.59%)
41-50 Years	124	26 (20.96%)	98 (79.04%)
>51 Years	25	3 (12%)	22 (88%)

DISCUSSION

Endometrium has been considered as one of the hormone sensitive and most changing tissue of the body which went through various changes throughout reproductive life; moreover, certain hormones receptors are responsible for the response of endometrium to estrogen and progesterone. AUB is the one of the commonest disease encountered day to day gynecological practice. However, AUB depends on quantity, regularity and timing of bleeding in patients which may be persistence from last six months in the majority of patients.^[4] Various aetiological factors has been found involved in the development of AUB; among them, more than 25% of cases belong to well established organic abnormalities. Further, DUB is considered when organic abnormalities are ruled out.^[5] DUB is most common during premenopausal state due to anovulatory cycle.^[8] Pelvis Ultrasonography is the preliminary and most important diagnostic tool which is correlated clinically to evaluate the cause of AUB; Nevertheless, dilatation and curettage may require in some cases as a diagnostic and therapeutic procedure. Most of the time diagnosis is based on symptoms and clinical findings of the patients.^[6] Endometrial biopsy is considered highly sensitive up to 96% for the diagnosis of endometrial abnormalities.^[9] Findings of the present study have shown that prevalence of AUB was increasing with the age. However, 10 % incidence was found in group IV patients of more than 50 years age group. Further, most of the AUB patient (49.6%) belonged to group III 41 to 50 years age group. These findings are consistent with previous reports of Yusuf et al and Muzaffar et al as they recorded similar changes in the endometrium in the same age group.^[10,11] This increased frequency of AUB in this age group may be due to increased incidence of an anovulatory cycle during premenopausal state.^[8]

Results of the current study showed that 94.4 % of AUB patients were parous in comparison of 5.6% nulliparous women suffering from AUB. Further, out of 250 AUB patients,^[3] were diagnosed as endometrial carcinoma; among them two were nulliparous. These findings are very similar to the previous study of Wahda et al.^[12] Increased incidences of carcinoma in nulliparous women indicating that nullipara is a risk factor for carcinoma of endometrium. This may be due to nullipara has been found associated with increased exposure of estrogen and decrease of progesterone during an ovulatory cycle.^[13] Findings of the current study revealed that commonest pattern of bleeding was Menorrhagia 40.8% followed by polymenorrhagia 16% while Metorrhagia 4 % was least common among all bleeding patterns. These findings are very similar to the findings of the Moghal et al in which they revealed various patterns of AUB via endometrial curettage.^[14]

Present study recorded that proliferative (33.6%) and secretory (27.2%) endometrium pattern was common among AUB patients which are consistent with the findings of the Doraiswami S et al.^[13] This DUB may be due to anovulatory cycle in proliferative endometrium and ovulatory cycle in secretory endometrium. However, loss of blood is not correlated clinically with histopathological findings. The commonest pathology diagnosed among AUB patients was endometrial hyperplasia 16% which is consistent with previous stud of by Afgan S et al.^[15] Further, early diagnosis of the endometrial hyperplasia is important to provide proper treatment and avoid any type of future malignancy incidence in AUB patients.

Endometrial biopsy can be an effective and safe tool for the diagnosis of early endometrial hyperplasia in patients of AUB after excluding other medical causes. Furthermore, histopathological findings of the endometrium in AUB patients may provide a wide spectrum to choose an appropriate treatment according to the pathology of the endometrium.

CONCLUSION

Findings of the present study suggest that there is a broad spectrum in variations of endometrium from normal to malignancy in AUB patients. Further, our study strongly suggests that premenopausal and menopausal women with AUB are threaded to malignancy and biopsy of the endometrium is unavoidable in the patients of above 41 years age group suffering with AUB. However, more studies on larger number of population are required to make a general guideline for AUB patients in a day to day gynaecology practice.

REFERENCES

1. The ESHRE Capri workshop group. Endometrialbleeding. Human reproduction update. 2007;13(5):421-31.

2. Ozdemir S, Celik C, Gezginc K Kireşi D, Esen H. Evaluation of endometrial thickness with transvaginal ultrasonography & histopathology in premenopausal women with abnormal vaginal bleeding. *Arch Gynecol Obstet.* 2010;282(4):395-9.
3. Mary GS, Tarin AS, Patrice MW. Evaluation and management of abnormal uterine bleeding in premenopausal women. *Am Fam Physician.* 2012;85(1):35-43.
4. Munro MG, Critchley HO, BroderMS, Fraser IS; FIGO Working Group on Menstrual Disorders. FIGO classification system for causes of abnormal uterine bleeding in nonpregnant women of reproductive age. *Int J Gynaecol Obstet.* 2011;113(1):3-13.
5. Brenner PF. Differential diagnosis of AUB. *Am J Obstet Gynecol.* 1996;175:766-9.
6. Albers JR, Hull SK, Wesley RM. Abnormal uterine bleeding. *Am Fam Phys.* 2004;69:1915-26.
7. Blaustein A. Benign diseases of the endometrium. In: *Pathology of the female genital tract.* 2nd ed. New York; Springer-Verlag; 1994: 279-311
8. Crum CP. The female genital tract. In: *Robbins & Cotran: Pathological basis of disease.* V Kumar, AK Abbas, N Fausto (Eds.); 8th Edn.; Saunders: An imprint of Elsevier, Philadelphia, 2010;1026-1027
9. Litta P, Merlin F, Saccardi C, Pozzan C, Sacco G, Fracas M. Role of hysteroscopy with endometrial biopsy to rule out endometrial cancer in postmenopausal women with abnormal uterine bleeding. *Marturitas.* 2005;50(2):117-23.
10. Yusuf NW, Nadeem R, Yusuf AW, Rahman R. Dysfunctional uterine bleeding a retrospective clinicopathological study over 2 years. *Pak J. Obstet Gynaecol.* 1996;9:27-30.
11. Muzaffar M, Akhtar KA, Yasmin S, Mahmood-Ur-Rehman, Iqbal W, Khan MA. Menstrual irregularities with excessive blood loss A clinicopathological correlation. *J Pak Med Assoc.* 2005;55(11):486-9.
12. Wahda MT, Manal TA, Safwan I. Histopathological Interpretation of Abnormal Uterine Bleeding After the Age of 40 Year. *The Iraqi Postgraduate Medical Journal.* 2010;9:274-82.
13. Doraiswami S, Johnson T, Rao S, Rajkumar A, Vijayaraghavan J, Panicker VK. Study of endometrial pathology in Abnormal uterine bleeding. *J Obstet Gynecol India.* 2011;61:426-30.
14. Moghal N. Diagnostic value of endometrial curettage in abnormal uterine bleeding- a histopathological study. *J Pak Med Assoc.* 1997;47:295-9.
15. Afgan S, Yasmeen A. Abnormal uterine bleeding a clinicopathological study of 150 cases. *Ann Pak Inst Med Sci.* 2013;9(4):201-4.

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