

Study of Clinicopathological Evaluation of Abnormal Uterine Bleeding in a Teaching Hospital in Telangana

Sangeeta Chippa¹, Vanamala Swetha²

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¹Associate Professor, ²Assistant Professor, Department of Obstetrics and Gynaecology, Maheshwara Medical College and Hospital, Patancheru, Hyderabad, Telangana 502307, India.

Corresponding Author: Sangeeta Chippa, Associate Professor, Department of Obstetrics and Gynaecology, Maheshwara Medical College and Hospital, Patancheru, Hyderabad, Telangana 502307, India.

E-mail: sangeetachippa@gmail.com

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Abstract

Introduction: The causes of abnormal uterine bleeding include a wide spectrum of diseases of the reproductive system and non-gynecologic causes as well. It is a common clinical problem encountered in routine gynecologic practice.

Aim of the study: To study the clinicopathological evaluation of abnormal uterine bleeding in a teaching hospital in Telangana.

Materials and methods: This was a prospective study done on patients presenting with AUB from June 2018 to July 2019 in the department of Obstetrics and Gynaecology at Maheshwara Medical College and Hospital, Patancheru, Telangana. Patient demographics, clinical presentation, parity and histopathology findings were studied in 120 AUB cases.

Results: A total of 120 cases were included in the study. The patient age ranged from 20 to 55 years. Most of the cases 63/120 (52.5%) were seen in the 41-45 years. Most of the cases of AUB were multiparous 70.8% (85/120). According to clinical presentation majority of women presented with menorrhagia 73.3% (88/120). According to Pap smear findings in AUB cases, most of them 91.6% (110/120) had no abnormality on Pap smears.

Conclusion: Abnormal uterine bleeding is common in perimenopausal period in the fifth and sixth decades

of life. Most common clinical presentation is of menorrhagia. Endometrial biopsy study is important in these cases to diagnose the pathological processes and also helps in diagnosing the more ominous hyperplasias and carcinomas of the endometrium.

Keywords: AUB; Clinicopathological evaluation of AUB; Postmenopausal bleeding.

Introduction

The term abnormal uterine bleeding has been used to describe any bleeding not fulfilling the criteria of normal menstrual bleeding. The causes of abnormal uterine bleeding include a wide spectrum of diseases of the reproductive system and non-gynecologic causes as well. Organic cause of abnormal uterine bleeding may be subdivided into reproductive tract disease, iatrogenic causes and systemic disease. When an organic cause of AUB cannot be found, then by exclusion, a diagnosis of dysfunctional uterine bleeding (DUB) is assumed. In about 25% of the patients, the abnormal uterine bleeding is the result of a well-defined organic abnormality.¹

The prevalence increases with age, peaking just prior to menopause. Thus, making perimenopausal women more vulnerable to AUB.²

Spectrum of common pathologies that can be detected histologically in AUB include hormonal imbalance pattern (disorderly proliferative endometrium, non-secretory endometrium with stromal and glandular breakdown, luteal phase defect and pill effect), atrophic endometrium, endometritis, endometrial polyp, endometrial hyperplasia and endometrial carcinoma. However, endometrial pathologies were noted in only about half of the cases of AUB and hormonal imbalance pattern dominated the clinical picture in some studies.^{3,4}

The sensitivity of endometrial biopsy for the detection of endometrial abnormalities has been reported to be as high as 96%.^{5,6}

Aims and Objectives

To study the clinicopathological evaluation of abnormal uterine bleeding in a teaching hospital in Telangana.

Materials and Methods

This was a prospective study done on patients presenting with AUB from June 2018 to July 2019 in the department of Obstetrics and Gynaecology at Maheshwara Medical College and Hospital, Patancheru, Telangana.

Patients were selected based on clinical details.

The study material included a total number of 120 endometrial samples (endometrial curettings and endometrial biopsy specimens). All specimens were transported in 10% formalin to the pathology laboratory. The specimens were adequately fixed in 10% formalin.

The gross and microscopy from all the tissue samples was studied.

The tissue bits were processed in LIECA automatic tissue processor and paraffin blocks were prepared. Tissue sections were cut and stained with hematoxylin and eosin stain (H&E).

Microscopic examination was done by two pathologists, individually to reduce observer bias.

Inclusion Criteria

- Patients willing to participate in the study
- Age group of 20–55 years
- The cases of abnormal uterine bleeding, attending the gynecology OPD with complaints of menorrhagia, metrorrhagia, polymenorrhea, and polymenorrhagia

Exclusion Criteria

- Patients not willing to participate
- Pregnant patients
- Patients below the age of 20 and above 55
- Products of conception on histopathology examination

Observations and Results

Sample size: A total of 120 cases were included in the study

Table 1: Distribution of cases according to age

Age (in years)	No. of cases	Percent (%)
20–25	05	4.1
26–30	08	6.6
36–40	14	11.6
41–45	63	52.5
46–50	20	16.6
51–55	10	8.3
Total	120	100

According to age distribution, maximum number of cases 63/120 (52.5%) were seen in the 41–45 years (Table 1).

Parity of the patients: Most of the cases of AUB were multiparous 70.8% (85/120) followed by primiparous 12.5% (15/120) and nulliparous 16.6% (20/120)

Table 2: Distribution of cases based on clinical presentation

Clinical presentation	No. of cases	Percent (%)
Menorrhagia	88	73.3
Metrorrhagia	13	10.8
Polymenorrhagia	10	8.3
Polymenorrhea	05	4.1
Continuous bleeding	04	3.3
Total	120	100

According to clinical presentation majority of women presented with menorrhagia 73.3% (88/120) (Table 2).

Table 3: Pap smear findings in AUB cases

Papsmear	No. of cases	Percent (%)
Normal	110	91.6
Abnormal	10	8.3
Total	120	100

According to Pap smear findings in AUB cases, most of them 91.6% (110/120) had no abnormality on Pap smears (Table 3).

Table 4: Endometrial pattern in AUB cases on histopathology

Report on biopsy	No. of cases	Percent (%)
Proliferative phase	91	75.8
Secretory phase	10	8.3
Endometrial hyperplasia	04	3.3
Atrophic	07	5.8
Endometrial polyp	06	05
Endometrial carcinoma	02	1.6
Total	120	100

Based on histopathology findings proliferative endometrium was the most common pattern reported in 75.8% (91/120) cases (Table 4).

Discussion

There are many indications for the study of endometrial biopsies. Important ones being abnormal uterine bleeding (AUB), bleeding per vaginam following incomplete abortions, and in cases where there is a clinical suspicion of endometrial hyperplasia or neoplasia. Also women with infertility commonly have to undergo endometrial sampling as a part of investigative protocol.⁷

Sample size: In the present study a total of 120 cases were studied over a period of one year.

Lotha et al.⁸ studied about 148 cases of AUB over a period of one year.

Kumari R et al.⁹ in their study included a total of 217 patients of AUB.

Afghan et al.¹⁰ had a total of 150 endometrial curettings in their study.

Age distribution: In our study, maximum number of cases 63/120 (52.5%) were seen the 41 to 45 years age group and remaining 20/120 (16.6%) were in 46–50 years, 14/120 (11.6%) were in 36–40 years, 10/120 (8.3%) were in 51–55 years. The younger patients were less and 8/120 (6.6%) in 26–30 years and 5/120 (4.1%) were seen in 20–25 years.

Kumari R et al.⁹ in their study observed that the patient age ranged from 25 years to 68 years with a mean of 47 years. Maximum patients with abnormal uterine bleeding presented in the age group of 41–50 years and the predominant pattern was proliferative changes which were followed by disordered proliferative changes.

Afghan et al.¹⁰ also reported maximum frequency of AUB in 31–40 years, 71 (47.2%), followed by 41 and above group having 53 (35.2%) cases, while

minimum was seen in younger patients of 21–30 years group with only 26 (17.6%) cases.

Mahapatra et al.¹¹ also observed AUB commonly among 40–45 years of age group. 10 cases (7.1%) were in age group 20–25 years, 12 (8.6%) cases were in age group 26–30 years, 29 (20.7%) cases were in age group 31–35 years, 35 (25%) cases were in the age group 36–40 years, 52 (37.2%) cases are in the age group 41–45 years, and very few cases were seen in the age group of 46–55 years.

Parity of the patients: In our study, most of the cases of AUB were multiparous women 70.8% (85/120) followed by nulliparous 16.6% (20/120); and least were primiparous women 12.5% (15/120).

Lotha et al.⁸ study also observed most of the cases of AUB to be multiparous (64.9%) followed by grandmultiparous (18.2%), primiparous (10.8%); and nulliparous (6.1%) were least.

Based on clinical symptoms: In the present study, according to clinical presentation majority of women presented were menorrhagia 73.3% and metrorrhagia 10.8%. Polymenorrhagia, polymenorrhea and continuous bleeding per vaginam were seen in a minority of patients.

Afghan et al.¹⁰ in their study observed the different symptoms with which majority of the women presented as menorrhagia in 34%, polymenorrhagia in 27% and metrorrhagia in 21% cases.

Lotha et al.⁸ also observed study that the most common bleeding disturbances were menorrhagia (49%) followed by polymenorrhagia (24%), metrorrhagia (11%), menometrorrhagia (8%), polymenorrhea (6%) and oligomenorrhea (2%).

Mahapatra et al.¹¹ reported similar presentation of menstrual disturbances like menorrhagia and metrorrhagia were found in 68 (48.6%) and 32 (22.9%) cases respectively. Incidence of polymenorrhagia was found in 24 (17.1%) cases, polymenorrhea in 14 (10.0%) cases and continuous bleeding in 2 (1.4%) cases.

Kumari R et al.⁹ also noted that most of their patients presented with menorrhagia which was the most common clinical feature followed by metrorrhagia.

Based on histopathology: In our study, based on histopathology findings, proliferative type of endometrium was the most common pattern reported in 75.8% (91/120) followed by secretory type of endometrium in 3.3% (10/120), atrophic

endometrium in 5.8% (7/120), endometrial hyperplasia in 3.3% (4/120). A few cases around 5% cases as endometrial polyp and only 1.6% (2/120) as endometrial adenocarcinoma (1.3%).

Lotha et al.⁸ in their study observed the overall occurrence of endometrial hyperplasia to be 48.6%. Proliferative endometrium was the second most common pattern seen in 41.4% followed by secretory endometrium (5.4%), atrophic endometrium (2%), adenocarcinoma (1.3%) and chronic inflammatory endometrium in (2%) cases.

Kumari R et al.⁹ noted that among the pathological patterns, simple hyperplasia was most common. Hyperplasia was noted in 36 patients out of which 32 were simple hyperplasia and 4 were complex hyperplasia 1 patient had atypical changes. There were cases of endometrial carcinoma and 5 cases of endometrial polyp. All cases of endometrial carcinoma were adenocarcinomas, out of which 3 patients had risk factors like obesity and diabetes mellitus.

Afghan et al.¹⁰ found in their study that histopathology showed normal physiological phases of menstrual cycle as proliferative and secretory phases of endometrium in 116 cases (76%). Endometrium was normal in 36% cases presenting with menorrhagia, and 46% cases with polymenorrhea, polymenorrhagia and metrorrhagia together. Leading pathology was hyperplasia, mostly cystic (4.6%) and adenomatous type (0.6%). Pill pattern was seen in 7.3% of cases and most of them fell in the 31–40 age group.

Mahapatra et al.¹¹ observed proliferative endometrium in found in 64 (45.7%) cases, secretory endometrium in 42 (30%) cases, and hyperplastic endometrium in 17 (12.1%) cases. Atrophic endometrium was found in 7 (5%) cases. Endometrial polyp and endometrial carcinoma were found in 5 (3.6%) cases and 1 (0.7%) cases respectively. They noted that cystic hyperplasia was common among the AUB patients, i.e. in 70.6% patients and atypical hyperplasia was seen in almost 11.8% cases.

Endometrial hyperplasia is of various sub-categories and has variable risk of progression to cancer depending on the type of the hyperplastic process. It is more common in the perimenopausal and menopausal period.¹²

Endometrial polyps are also common cause for AUB and are frequently encountered in women around 40 years age.¹³ In our study we did not observe any endometrial polyps.

Based on Pap smear: In our study, in AUB cases, no abnormality was detected on Pap smears in 91.6% (110/120) cases. Abnormal Pap smear was reported in 8.3% (10/120) cases.

Mahapatra et al.¹¹ reported no abnormality on Pap smears in 135 (96.4%) cases. They observed abnormal findings on Pap smear in 5 (3.6%) cases.

Conclusion

Abnormal uterine bleeding is common in perimenopausal period in the fifth and sixth decades of life. Most common clinical presentation is of menorrhagia. Endometrial biopsy study is important in these cases to diagnose the pathological processes and also helps in diagnosing the more ominous hyperplasias and carcinomas of the endometrium.

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