

# Study of Endometrial Morphology in Patients of Abnormal Uterine Bleeding

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## ABSTRACT

**Background:** Abnormal uterine bleeding is most commonly observed in gynecology. It is a uterine hemorrhage happening at irregular intervals in excessive amount, importantly with idiopathic cause.

**Objective:** To evaluate the histologically patients with abnormal bleeding for their efficient diagnosis.

**Methods:** This prospective study was conducted at Department of Gynaecology and Obstetrics, Islam Teaching Hospital Sialkot from 1<sup>st</sup> January 2017 to 31<sup>st</sup> July 2017. One hundred patients of abnormal uterine bleeding between the 22<sup>nd</sup> to 25<sup>th</sup> days of the periodic cycle were included. Ongoing excessive vaginal bleeding, patients were examined by alcian blue, alkaline phosphates and periodic Acid Schiff tests. The patients of uterine pathology, cardiac and liver disorders, thyroid and polyps disorders were excluded in this study.

**Results:** The levels of bleeding were marked as 46 patients (46%) with proliferative, 19 patients (19%) with secretory, 15 (15%) patients with inconsistent ripening, 16 (16%) patients with atrophic endometria and 4 (4%) patients with inconsistent shedding type bleeding.

**Conclusion:** The most common types of endometrial abnormal uterine bleeding were secretory and proliferative endometrial bleeding in all patients.

**Keywords:** Abnormal uterine bleeding, Histological markers and anovulation, Post and pre-menopause

## INTRODUCTION

Abnormal excessive uterine bleeding is a highlighted problem observed in gynaecology. Abnormal uterine bleeding (AUB) is an excessional amount of uterine bleeding at inconsistent intervals<sup>1</sup>. Abnormal uterine bleeding is pronounced when no other cause of such bleeding can be justified. The cause behind AUB might be related with hyperplasia, blood vessel infections, poor diet, ovarian dysfunctions, stress releasing hormonal imbalance or pregnancy<sup>2</sup>. Only 5% of menopausal women are effected by above mentioned causes for AUB<sup>3</sup>.

Studies also reported that most usual cause of the AUB is anovulatory period<sup>4</sup> while co-morbidities of prolactin and progesterone endometrium deficiencies, dysfunctional platelets may also result in AUB<sup>5,6</sup>.

The aim of this study was to find the prevalence of AUB in Pakistani women. This prevalence study could identify different grades of AUB and help in its better management.

## PATIENTS AND METHODS

This prospective study was conducted at Department of Gynaecology and Obstetrics, Islam Teaching Hospital Sialkot from 1<sup>st</sup> January 2017 to 31<sup>st</sup> July 2017. In this study 100 patients of abnormal uterine bleeding were included in the age group of 17 year to 52 years. In this study a detailed clinical examination including evaluation of uterus, comprehensive hematological profile, ultrasonic assessment of uterus, platelets counts and computerized tomography scans were conducted. Thyroid function tests and blood sugar fasting/routine were also conducted. For the purpose of investigation the endometrial biopsies were conducted randomly between 20<sup>th</sup> to 25<sup>th</sup> days of menstrual cycle with ongoing vaginal bleeding. In each case the endometrium tissues were processed in 2 samples. The first sample was conserved for formal saline and managed for E&H alcian blue stain (ABS) and periodic acid Schiff.

The second sample ABS test was used for observing acid mucopoly in the glanular and PAS thus used to observe the droplets of glycogen of secretory stage of patients. Alkaline phosphate test was also used for observing the proficiency of alkaline in the proliferate group of patients. Data was entered and analyzed by SPSS version 20.

## RESULTS

Table 1: Frequency and percentage of age

Age (years)	No.	%
19 – 24	10	10.0
25 – 29	8	8.0
30 – 34	16	16.0
35-39	34	34.0
30-44	20	20.0
49-50	12	12.0

Table 2: Symptoms observed in patients

Symptoms	No.	%
Metrorrhagia	37	37.0
Menorrhagia	33	33.0
Premenopausal	2	2.0
Postmenopausal	5	5.0
Polymenopausal	23	23.0

Majority of patients 52% were between 34 to 44 years of age (Table 1). Clinical symptoms were metrorrhagia 37%, menorrhagia 33%, premenopausal bleeding 2%, polymenorrhagia 23% and post-menopausal bleeding as 5% (Table 2).

Blood test revealed 51% AUB patients as anemic. Out of these 51% patients the percentage of hemoglobin was 9.8-12.2g% in 52% patients and 37% were noted as 8.2-10.1g%, and 11% were having Hb levels as 6.3-7.11g%. Histochemistry of AUB patients revealed 46% having proliferative, 19% having secretory, 15% with inconsistent ripening, 16% having atrophic and 4% with inconsistent shedding type of bleeding abnormalities (Table 3).

Table 3: Histochemistry of the patients with special stains

Participants	+ E&H marks	+ through alcian blue		+ through alkaline		+ through periodic acid schiff	
		No.	%	No.	%	No.	%
Pre-proliferative	14	-	-	2	14.3	-	-
Delayed proliferative	32	-	-	20	62.5	-	-
Pre-secretory	8	4	50.0	-	-	5	62.5
Delayed secretory	11	10	90.9	-	-	11	100.0
Inconsistent shedding	4	4	100.0	-	-	3	75.0
Inconsistent ripening	15	9	60.0	-	-	10	66.6
Atrophic	16	-	-	-	-	-	-

## DISCUSSION

In this study 16% to 19% of cases had secretory endometrium histochemistry and 46% were having proliferative, Mean patients age was 34 to 44 years with an average of 34% between 35 to 39 years. Similar age group has been mentioned in other studies<sup>6-8</sup>. Metrorrhagia observed as a most frequent symptom (37%) than menorrhagia and pre and post and pre menopausal which were also observed.<sup>9</sup> Hemoglobin were also examined in the patients and found <12g% in mostly patients. Many other studies found that the vascular changes in proliferative endometria was <11%<sup>10,11</sup>. Management of bleeding through blood vessels causing prolonged bleeding. We observed the inflammation in the uterine bleeding patients was 2% in AUB patients. The results of the present study are comparable with the international literatures in which they have reported 3% inflammation in AUB patients<sup>12-14</sup>.

Blood sugar levels were also examined in all the 100 cases of AUB with remarkable results. Only 2% patients have high sugar levels. However on examining their clinical history they were found as already diagnosed cases with high sugar level.

## CONCLUSION

Abnormal uterine bleeding is a most usual gynaecological problem in the women and 21% of women try to overcome these problems through medical examination. Proliferative endometrial bleeding was most commonly seen while secretory type was less commonly presented than proliferative. However, histochemical examination can be a helpful tool in proper management of patient with AUB.

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