

## Clinico-Histopathological Analysis In Patients With Abnormal Uterine Bleeding

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**Abstract:** Background: Menstrual disturbance is one of the commonest gynecological problems for the curettage or hysterectomy specimen received by pathologist. During reproductive age group, approximately 9-30% of women suffer from menorrhagia or abnormal uterine bleeding & the incidence increases as age advances. Being most common gynecological problem, present study is aimed to know full spectrum of AUB and its pathological aspects. Methods: 200 cases were taken from NHL Municipal Medical College, Ahmedabad over a period of 3 years. Clinical history and radiological findings of cases of abnormal uterine bleeding were noted. Histopathological analysis was done. Data were analyzed and correlation between clinical and histopathological findings were studied. Results: Maximum numbers of patients were in 41-50 years (41.5%) of age group and next are in 31-40 years (38%) of age group. Proliferative pattern (24%) was most common pattern in non-structural causes of AUB and Leiomyoma (22.5%) was the most common structural cause of AUB. Pregnancy related causes of AUB were common in less than 40 years of age group. Malignancy was more common in more than 50 years of age group. Atrophic endometrium (33.33%) was the most common cause of post-menopausal bleeding. Conclusion: Endometrial specimen examination by histopathological evaluation is gold standard procedure to know the exact pathology for AUB and for further management of patients. [Falguni S NJIRM 2016; 7(5):14-17]

**Keywords:** Abnormal Uterine Bleeding, Histological Findings, Clinical findings

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**Introduction:** Abnormal uterine bleeding (AUB) is bleeding that is abnormal in frequency, amount or duration, or combination of all three. It is common in women of all ages. Heavy menses, prolonged menses or frequent irregular bleeding are the most common complaints and accounts for above one third of all gynecological consultations.<sup>1</sup> Menstrual disturbance is one of the commonest gynecological problems for the curettage or hysterectomy specimen received by pathologist.<sup>2</sup> AUB is the commonest cause of iron deficiency anemia in the developed and of chronic illness in the developing world.<sup>3</sup> 9 to 30% of reproductive age group women suffer from menorrhagia or abnormal uterine bleeding, incidence increases as age advances.<sup>4</sup> By studying clinical and histopathological findings of various causes of AUB and their patterns, one can prevent or minimize the complication of AUB by timely investigations and interventions. Being most common gynecological problem, present study is aimed to know full spectrum of AUB and its pathological aspects.

**Aim of the study:** The study was undertaken to evaluate endometrial histopathology in cases of AUB, to determine the relative frequencies and to compare our results with those of other studies.

**Methods:** This observational study was carried out with analysis of clinical and histopathological findings in cases of abnormal uterine bleeding. 200 cases were

taken from NHL Municipal Medical College, Ahmedabad over a period of 3 years. Clinical history and radiological findings were noted. Histopathological examination of all specimens was carried out. Clinicopathological correlation was done & data were analyzed.

**Results:** A total 200 cases were studied in present series which were clinically presented with abnormal uterine bleeding. Proliferative pattern (24%) was the most common pattern in non-structural causes of AUB followed by secretory pattern (13.5%). Leiomyoma (22.5%) was the most common structural cause of AUB followed by adenomyosis (9.5%). Endometrial hyperplasia was seen in 8.5% of patients. Among all hyperplasias, simple hyperplasia (7.5%) was more common than atypical hyperplasia (1%). Eight cases of adenomyosis, 2 cases of atrophic endometrium and 1 case of endometrial polyp were presented along with leiomyoma. Four cases of simple endometrial hyperplasia and one case of endometrial polyp were presented with adenomyosis.

**Table- 1 : Types Of Specimen:**

Types Of Specimen	Patients	Percentage
Hysterectomy specimens	117	58.5%
D & C material	74	37%
Hysteroscopic biopsies	9	4.5%
Total	200	100%

Hysterectomy specimen(58.5%) was the most common specimen followed by D & C material(37%) In our study, maximum numbers of patients were in 41-50 years (41.5%) of age group and next are in 31-40 years (38%) of age group.

Pregnancy related causes of AUB were common in less than 40 years of age group. Leiomyoma, Atrophic endometrium and Hyperplasia of endometrium were common in less than 40 years of age group. Malignancy was more common in more than 50 years of age group. One case of Endometrial carcinoma was presented at age of 40 years.

**Table- 2: Incidence Of Aub In Different Age Groups:**

Age In Years	Present Study	
	Patients	Percentage
Upto 20	3	1.5%
21-30	16	8%
31-40	76	38%
41-50	83	41.5%
51-60	17	8.5%
More than 60	5	2.5%
Total	200	100%

**Table- 3: Incidence Of Causes Of Aub In Relation To Age:**

Causes	Age In Years								Total Cases	
	Upto 30		31-40		41-50		>50			
	No.	%	No.	%	No.	%	No.	%	No.	%
Proliferative Phase	5	26.31	18	23.68	20	24.09	5	22.72	48	24
Secretory Phase	2	10.52	16	21.05	9	10.84	0	0	27	13.5
Progestational changes	0	0	6	7.89	2	2.4	0	0	8	4
Disordered Proliferation	1	5.26	1	1.31	0	0	0	0	2	1
Simple Hyperplasia	1	5.26	4	5.26	8	9.63	2	9.09	15	7.5
Atypical Hyperplasia	0	0	0	0	2	2.4	0	0	2	1
Atrophic Endometrium	0	0	0	0	1	1.2	8	36.36	9	4.5
Adenomyosis	0	0	7	9.21	11	13.25	1	4.54	19	9.5
Endometrial Polyp	1	5.26	5	6.57	2	2.4	1	4.54	9	4.5
Leiomyoma	0	0	15	19.73	27	32.53	3	13.63	45	22.5
Endometrial Carcinoma	0	0	1	1.31	0	0	2	9.09	3	1.5
Product of Conception	3	15.78	1	1.31	1	1.2	0	0	5	2.5
Ectopic Pregnancy	4	21.05	2	2.63	0	0	0	0	6	3
Hydatidiform Mole	2	10.52	0	0	0	0	0	0	2	1

**Discussion:** Abnormal uterine bleeding (AUB) is a common reason for women of all ages to consult their gynaecologist. It includes both organic and non – organic causes of uterine bleeding which ranges from a wide spectrum of diseases of reproductive system and nongynaecologic causes. The major emphasis is to use the simpler term AUB in place of 'Menorrhagia',

'Metrorrhagia', 'Hypermenorrhoea' and Dysfunctional Uterine Bleeding'. In 2011, a new system for the classification of AUB was approved by the International Federation of Gynecology and Obstetrics (FIGO) This classification system is stratified into nine basic categories that are arranged according to the acronym PALM-COIN: polyp,

adenomyosis, leiomyoma, malignancy and hyperplasia, coagulopathy, ovulatory dysfunction,

endometrial disorder, iatrogenic and not yet classified. This system recognizes instances of contribution of more than one pathology in an individual symptomatic woman and also lack of contribution of a coincidental asymptomatic pathology towards AUB due to other causes. Studies by different authors have classified causes of AUB according to age group and etiologies like pregnancy related, malignancy, endometrial hyperplasia and cyclic endometrium etc.

Endometrial causes of abnormal uterine bleeding is age related pathology. . In perimenopausal women AUB is most commonly dysfunctional in origin and in reproductive age group, one should rule out pregnancy associated conditions. In our study maximum number of patients were in 31-40 & 51-60 years age group which is consistent with other studies.

**Table - 4 : Incidence Of Aub In Different Age Groups Comparison With Other Studies:**

Age Group (Years)	Study By Moh Aseel Et Al <sup>5</sup>	Study By Arti Et Al <sup>6</sup>	Study By Doraisami Et Al <sup>7</sup>	Present Study
Up to 20	3.42%	0.62%	1.47%	1.5%
21-30	15.42%	10.63%	20.78%	8%
31-40	30.67%	37.5%	28.36%	38%
41-50	36%	45.63%	33.5%	41.5%
51-60	10.29%	5%	11%	8.5%
>60	4.19%	0.62%	4.89%	2.5%

**Table - 5 : Comparison Of Incidence Of Causes Of Aub With Study Of Fozia Et Al**

CAUSES	STUDY BY FOZIA ET AL <sup>8</sup>	PRESENT STUDY
Proliferative Phase	5%	24%
Secretory Phase	7.2%	13.5%
Atrophic Endometrium	1%	4.5%
Adenomyosis	15%	9.5%
Endometrial Polyp	3%	4.5%
Leiomyoma	25%	22.5%
Malignancy and Hyperplasia	6.6%	10%
Other causes	37.2%	11.5%

**TABLE - 6 : COMPARISON OF INCIDENCE OF CAUSES OF AUB WITH STUDY BY JIGNASHA ET AL:**

CAUSES	STUDY BY JIGNASHA ET AL <sup>9</sup>	PRESENT STUDY
Cyclic Endometrium	21.29%	37.5%
Disorded Proliferation	21.94%	1%
Simple Hyperplasia	3.87%	7.5%
Atypical Hyperlasia	3.23%	1%
Polyp	7.1%	11%
Pregnancy related causes	5.8%	6.5%
Leiomyoma, Adenomyosis & Other causes	36.77%	35.5%

Incidence of endometrial polyp, leiomyoma , malignancy & hyperplasia of our study were comparable with the study by Fozia et al<sup>8</sup>.There is differences in cyclic changes of endometrium which is higher in our study due to hormonal imbalance with ovarian dysfunction or endocrine disorder. While Fozia

et al studied endometrial pathology according to PALM-

COIN classification and other causes are included under Iatrogenic and Yet not classified group. Incidence of Liomyoma, Adenomyosis, polyp and pregnancy related causes of present study were correlate well with study by Jignasha et al<sup>9</sup>

According to study by Jignasha et al<sup>9</sup> patients belonged to reproductive age group with disordered proliferative endometrium( 21.94%)denotes endometrial appearance that is hyperplastic but without an increase in endometrial volume. It also refers to a proliferative phase endometrium that does not seem appropriate for any one time in the menstrual cycle, this process is diffuse then focal. In our study as those patients have no endometrial thickness we have included in cyclic endometrial changes; that is why our incidences of disordered proliferative endometrium is less. In present study cases of simple hyperplasia (7.5%) are more than cases of Disordered proliferative endometrium(1%) in comparison to Jignasha et al. The reason is that cases which have endometrial gland to stroma ratio was 2:1 to 3:1 so that stroma comprised less than one third volume consider under cases of simple hyperplasia while in Disordered proliferative endometrium morphology resembles normal proliferative phase with roughly normal ratio of glands to stroma and absence of uniform glandular development<sup>10</sup>

**Conclusion:** Leiomyoma, and Hyperplasia of endometrium were common between 30- 50 years of age group. Malignancy and Atrophic endometrium was more common in more than 50 years of age group. Endometrial specimen examination by histopathological evaluation is relatively inexpensive, accurate and gold standard procedure to know the exact pathology for AUB. By studying clinical and histopathological findings of various causes of AUB and their patterns, one can prevent or minimize the complications of AUB by timely investigations and interventions which is useful for successful, resourceful management of AUB.

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