

## A Histopathological Study of Endometrium in Abnormal Uterine Bleeding At A Tertiary Care Centre in Andhra Pradesh.

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### Abstract

**Background:** Abnormal uterine bleeding is a collective terminology with varied etiologies. Endometrial sampling is essential for planning treatment.

**Aim:** To study the histopathological patterns of endometrium in women of different age groups presenting with abnormal uterine bleeding.

**Material and methods:** This is a prospective observational study of 116 women with abnormal uterine bleeding attending the out patient department at Government General Hospital, Vijayawada from August 2017 to July 2018. Endometrial biopsy was taken in all women above 40 years and in women below 40 years with risk factors of endometrial cancer and or unresponsive to medical management. Histopathological examination of biopsy specimen was done by a pathologist. Data was collected and tabulated. Results were analysed using SPSS Version 24.

**Results:** The maximum number of cases was in the 40-50 years age group with 53 cases (45.6%). Non-organic causes of abnormal uterine bleeding in this study were 78 cases (67.2%) organic causes like fibroid uterus, PID etc were seen in 38 cases (32.7%). Proliferative endometrium was seen in 60 cases (51.7%) followed by secretory pattern seen in 35 cases (30.17%). In this study endometrial hyperplasia was seen in 3 cases (2.5%) followed by endometrial cancer was seen in 1 case (0.86%).

**Conclusion:** Abnormal uterine bleeding has varied etiologies and histopathological evaluation is essential for appropriate diagnosis and management.

**Key words:** Abnormal uterine bleeding, endometrial histopathology, menorrhagia.

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Date of Submission: 08-02-2019

Date of acceptance: 23-02-2019

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### I. Introduction

Abnormal Uterine Bleeding is caused by a wide variety of disorders and may be the common presenting complaint in patients with pre malignant endometrial lesions<sup>[1,2]</sup>. An endometrial biopsy is essential to make a histopathological diagnosis to guide further treatment.

### II. Material And Methods

This is a prospective observational study conducted on patients with complaints of abnormal uterine bleeding attending the outpatient department at Government General Hospital, vijayawada from August 2017 to July 2018. A detailed history and a complete general examination was done, routine investigations like hemoglobin, bleeding time, clotting time, complete blood picture, coagulation profile, urine microscopy, ultrasound abdomen and pelvis was done. A total number of 116 cases of AUB underwent endometrial biopsy. All cases of AUB greater than 40 years of age and all cases by AUB who were less than 40 years of age but had risk factors of endometrial cancer and or who were not responding to medical management underwent endometrial biopsy. Microscopic examination of the endometrial tissue was done by a pathologist at Siddhartha Medical College, Vijayawada. Data was collected, tabulated and analyzed using SPSS version 24.

**III. Results**

**Table 1** Age wise distribution

AGE GROUP	NUMBER OF CASES (116)	PERCENTAGE
<30 yrs	16	13.7%
30-40 yrs	41	35.3%
40-50 yrs	53	45.6%
>50 yrs	6	5.1%
TOTAL	116	100%

The maximum number of cases were in the 40-50 years age group, 53 cases (45.6%) followed by the 30-40 years age group with 41 cases (35.3%), 16 cases (13.7%) were less than 30 years old and 6 cases (5.1%) were above 50 years.

**Table2:** Cause of AUB

CAUSE	NUMBER OF CASES (n=116)	PERCENTAGE
Non Organic	78	67.2%
Organic	38	32.7%
TOTAL	116	100%

Non- organic causes of abnormal uterine bleeding in this study were 78 cases (67.2%) organic causes like fibroid uterus, PID etc were seen in 38 cases (32.7%),

**Table:3** Organic pathology in AUB

ORGANIC PATHOLOGY	NUMBER OF CASES (38)	PERCENTAGE
Fibroids	18	47.3%
Adenomyosis	7	18.4%
Polyps	10	26.3%
PID	3	7.8%
TOTAL	38	100%

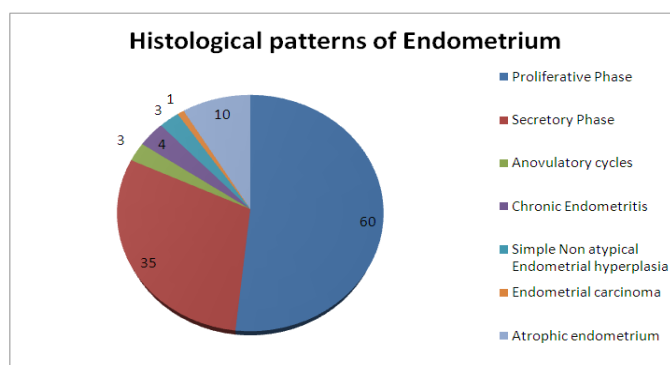
Fibroid uterus was the most common organic lesion in AUB seen in 18 cases(47.3%)(Fig 5). Polyps formed the next common cause of AUB seen in 10 cases (26.3%).Adenomyosis was seen in 18.4% of cases.(Fig 6)

**Table 4:** Endometrial patterns seen in AUB

ENDOMETRIAL HISTOLOGICAL PATTERN	NUMBER OF CASES (n=116)	PERCENT AGE
Proliferative phase	60	51.7%
Secretory phase	35	30.17%
Anovulatory cycles	3	2.5%
Chronic endometritis	4	3.4%
Simple non atypical endometrial hyperplasia	1	0.86%
Endometrial cancer	10	8.62%
Atrophic endometrium		
TOTAL	116	100%

Proliferative endometrium was seen in 60 cases (51.7%)(Fig1)followed by secretory pattern seen in 35 cases (30.17%)(Fig 3).Anovulatory cycles in 3 cases (2.5%)(Fig 2).Chronic endometritis was seen in 4 cases (3.4%) and atrophic endometrium was seen in 10 cases (8.62%)(Fig4). In this study simple non atypical endometrial hyperplasia was seen in 1 case (0.86%)(Fig8,8A).

Pie chart



#### IV. Discussion

AUB is defined as abnormal uterine bleeding if any cause not fulfilling the criteria of normal menstrual bleeding in absence of any organic lesion in the genital tract or any systemic disease, the term dysfunctional uterine bleeding is used. In 75% of cases DUB is the cause. In about 25% of cases, the abnormal uterine bleeding is due to a well defined organic abnormality<sup>[3]</sup>.

The most likely etiology of AUB relates to the patients age as to whether the patient is premenopausal, menopausal or post menopausal<sup>[4]</sup>.

AUB was commonly related to nonorganic cause and premenopausal women were the most common age group. Chronic endometritis is seen as a complication of pregnancy, abortion or IUCD insertion. This condition needs to be diagnosed as with specific treatment endometrium starts functioning normally<sup>[5]</sup>. Excessive bleeding was common in age group 40-50 year<sup>[6,7]</sup>.

The sensitivity of endometrial biopsy for detection of endometrial abnormalities has reported as high as 96%.

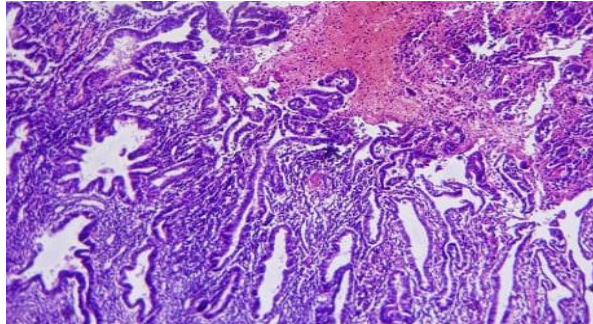
In the present study the maximum cases were in the 40-50 year age group similar to Yusuf et al<sup>[6]</sup> and Muzzayar et al<sup>[7]</sup>. Non organic causes were more common in studies by Chitra et al<sup>[8]</sup> and Doraiswami Saraswathi et al<sup>[5]</sup> as seen in the present study (67.2%). Fibroids were the most common organic cause seen in 18 cases (47.3%). Proliferative endometrium was the most common histopathological report seen in 51.7% cases in the present study. In the study by Jairaj puri et al<sup>[9]</sup> proliferative endometrium was the most common endometrial pattern. The incidence of endometrial cancer in the study was 0.86% and similar to study by Gerald et al<sup>[10]</sup> and Khan et al<sup>[11]</sup> with incidence of 1.7% and 0.4% respectively.

#### V. Conclusion

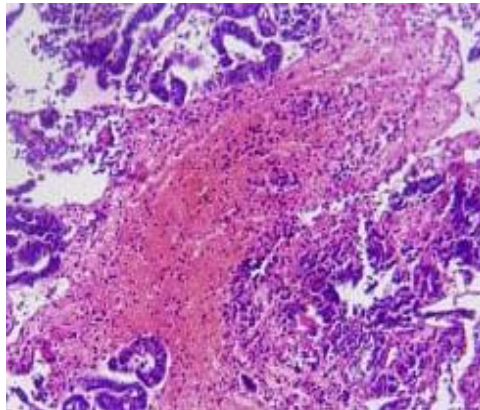
AUB is a common complaint in women attending the Gynecology outpatient department. Abnormal uterine bleeding has varied etiologies and histopathological evaluation is essential for appropriate diagnosis and management

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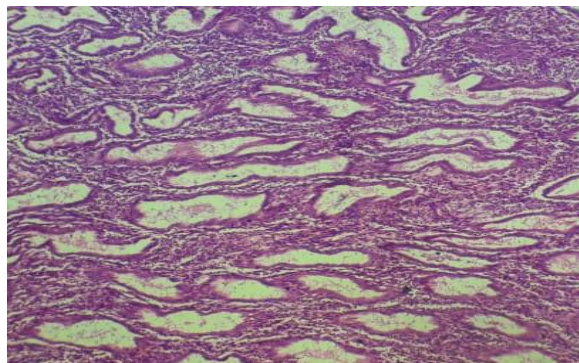
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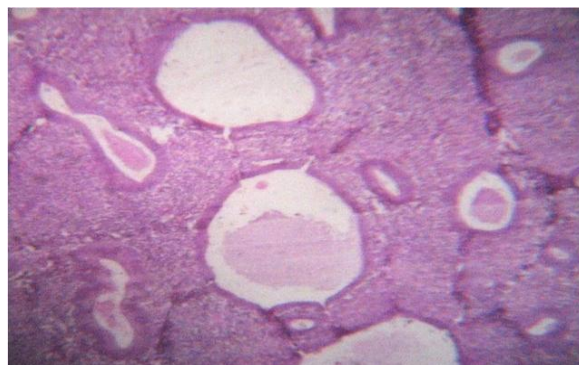
**Fig 1:** Endometrial glands in late proliferative phase (100X,H&E stain)



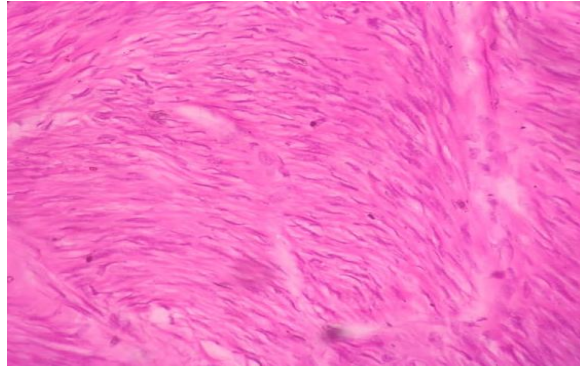
**Fig 2:** Anovulatory cycles - Fragmented Endometrial glands with fibrinous material (100X,H&E stain)



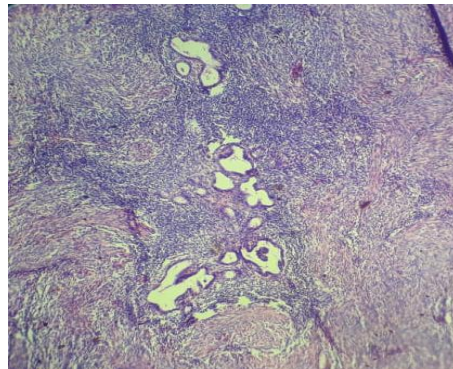
**Fig 3:** Secretory phase – saw tooth endometrial glands with secretion(100X,H&E stain)



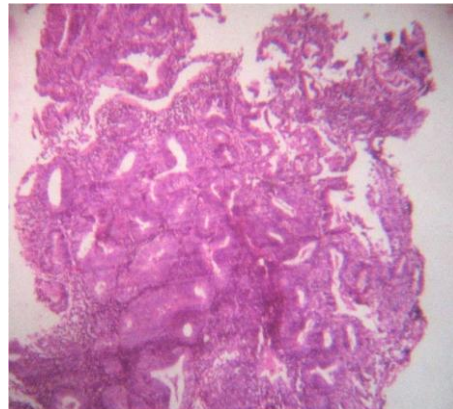
**Fig 4:** Atrophic endometrium – Decreased number of glands which are cystically dilated (100X,H&E stain)



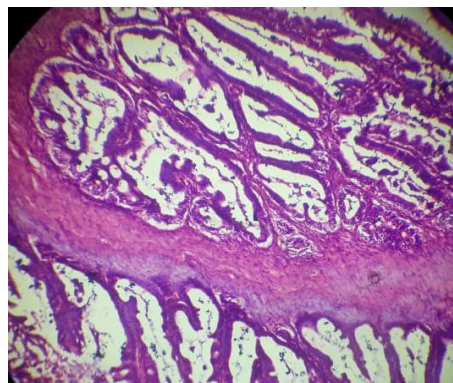
**Fig 5:** Leiomyoma –Interlacing fascicles of spindle shaped cells(100X,H&E stain)



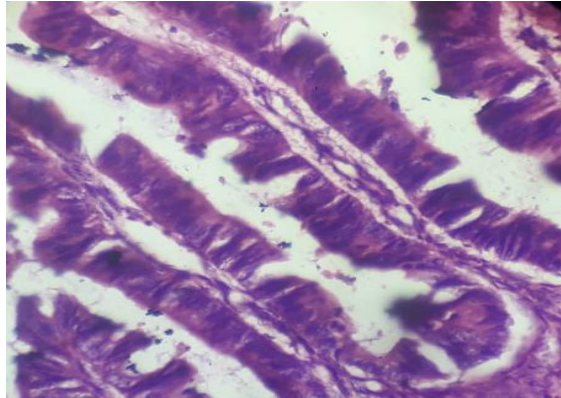
**Fig 6:** Adenomyosis – endometrial glands with stroma in myometrium (100X,H&E stain)



**Fig7:** Simple non atypical endometrial hyperplasia – endometrial glands with back to back arrangement ,minimal stroma and no nuclear atypia. (100X,H&E stain)



**Fig 8:** Endometrial carcinoma – complex endometrial glands with back to back arrangement , invading the myometrium (100X, H&E stain)



**Fig 8 A:** Endometrial carcinoma – Papillary pattern of glands with stratification of nuclei (400X,H&E stain)

Dr.Tirunagari Lahari."A Histopathological Study of Endometrium in Abnormal Uterine Bleeding At A Tertiary Care Centre in Andhra Pradesh." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 18, no. 2, 2019, pp 01-06