



HISTOPATHOLOGICAL STUDY OF ENDOMETRIAL SAMPLES IN TRIBAL WOMEN OF JHARKHAND: A PROSPECTIVE STUDY

Pathology

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ABSTRACT

Introduction: Histological characteristics of endometrial biopsy material as assessed by light microscopy remain the diagnostic standard for the clinical diagnosis of endometrial pathology. Management of abnormal uterine bleeding is not complete without tissue diagnosis.

Aim: The aim of the study was to find out the histopathological pattern of the endometrium in abnormal uterine bleeding among tribal women of Jharkhand.

Material and methods: This study was done in the histopathology section of department of Pathology, RIMS, Ranchi. We have selected hundred Tribal women having abnormal uterine bleeding from July 2019– December 2019. The study material included a total number of 100 specimens consisting of 61 endometrial samples (endometrial curettage and biopsy) and 39 hysterectomy specimens.

Results: The study found that out of 100 samples of endometrium, 95 samples were adequate for histopathological reporting where as 5 samples have scanty tissues. Most common age group of this study was 41 to 45 years (37 cases) followed by 36 to 40 years (23 cases). On the basis of histopathological examination we got 55 cases of proliferative endometrium followed by 10 cases of secretory endometrium. We got 8 cases of Non –atypical endometrial hyperplasia and 2 cases of proliferative endometrium with non atypical hyperplasia and 6 cases of Atypical Endometrial hyperplasia. In this study we also found malignant lesions, like 3 cases of Endometrial Adenocarcinoma, one cases of poorly differentiated Squamous cell carcinoma and one more case of Endometrial stromal tumor.

Conclusion: It is important to know the histological pattern of the endometrium in abnormal uterine bleeding in different age groups since it will help in the management of the cases.

KEYWORDS

Histopathology, Endometrium, Tribal women.

INTRODUCTION

Endometrial biopsies are obtained for a number of reasons that include abnormal uterine bleeding in certain age groups, incomplete abortions, or suspected neoplasia and the endometrium may be sampled prior to certain procedures to treat infertility to determine the phase of the cycle to guide further tests or treatments [1]. Endometrial sampling could be effectively used as the first diagnostic step in AUB, although at times, its interpretation could be quite challenging to the practicing pathologists. This study was done to evaluate histopathology of endometrium for identifying the endometrial causes of AUB. We also tried to observe the incidence of various pathology in different age groups presenting with abnormal uterine bleeding [2]. Abnormal uterine bleeding may be defined as a bleeding pattern that differs in frequency, duration, and amount from a pattern observed during a normal menstrual cycle or after menopause [3]. It includes both dysfunctional uterine bleeding (DUB) and bleeding from structural causes like fibroids, polyps, endometrial carcinoma, and pregnancy complications. Menopause is an important event occurring during middle age in women and represents the end of a woman's reproductive life. The age at which natural menopause occurs is between the age of 45 and 55 years worldwide and a study from north India concluded that the mean age at menopause was 44.54 years.[4] Histological characteristics of endometrial biopsy material as assessed by light microscopy remain the diagnostic standard for the clinical diagnosis of endometrial pathology. Indeed, the initial diagnosis is made by endometrial biopsy or by curettage, which in itself may be therapeutic. Conversely, the biopsy or curettage may not sample the entire endometrium, and the areas of greatest histological or cytological severity may thus escape histological identification. Management of abnormal uterine bleeding (AUB) is not complete without tissue diagnosis especially in perimenopause and post menopause.

MATERIAL AND METHODS

This is a prospective study done in the histopathology section of department of Pathology, RIMS, Ranchi. We have selected hundred Tribal women having abnormal uterine bleeding from July 2019– December 2019. The study material included a total number of 100 specimens consisting of 61 endometrial samples (endometrial curettage and biopsy) and 39 hysterectomy specimens. The endometrial specimens were received in 10% formalin solution. The gross morphology was recorded with total submission of endometrial

samples and representative bits were taken from the hysterectomy specimens. The tissues were processed, sectioned and stained with hematoxylin and eosin. The slides were studied under light microscopy for the period of six months. Data obtained were entered in Microsoft Excel – 2007 after proper template generation and analysis was done using SPSS software version 20.

Inclusion criteria

- All tribal women having abnormal uterine bleeding were included.

Exclusion criteria

- Non-tribal women were excluded from study.
- Patients undergoing endometrial evaluation for infertility workup, suspected to be having pregnancy-related problems or pyometra or hematometra, were excluded from the study.

RESULTS

This study found that out of 100 samples of endometrium, 95 samples were adequate for histopathological reporting where as 5 samples had scanty tissues. Most common age group of this study was 41 to 45 years (37 cases) followed by 36 to 40 years (23 cases). On the basis of histopathological examination we got 55 cases of Proliferative Endometrium followed by 10 cases of Secretory Endometrium. In addition of 55 cases of Proliferative Endometrium there were 3 cases of proliferative endometrium with adenomyosis in hysterectomy samples and also 3 cases of proliferative endometrium with cystic changes. We got 8 cases of Non –atypical endometrial hyperplasia and 2 cases of proliferative endometrium with non atypical hyperplasia and 6 cases of Atypical Endometrial hyperplasia. In this study we also found malignant lesions, like 3 cases of Endometrial Adenocarcinoma, one cases of poorly differentiated Squamous cell carcinoma and one more case of Endometrial stromal tumor. In this study we got 3 cases of Endometrial polyp.

All the data of results showing as follow in the given tables.

Table 1: showing frequency of HPE diagnosis of Endometrial Biopsy

HPE Diagnosis	Frequency	Percent
Atypical Endometrial Hyperplasia	6	6.0

Endometrial Adenocarcinoma	3	3.0
Endometrial Polyp	3	3.0
Endometrial stromal tumor	1	1.0
Non- atypical Endometrial Hyperplasia	8	8.0
Poorly differentiated Squamous cell carcinoma	1	1.0
Proliferative Endometrium	55	55.0
Proliferative Endometrium with Adenomyosis	3	3.0
Proliferative Endometrium with cystic changes	3	3.0
Proliferative Endometrium with typical Hyperplasia	2	2.0
Scanty tissue	5	5.0
Secretory Endometrium	10	10.0
Total	100	100.0

Table 2: showing frequency of age group of Endometrial biopsy

Age - group	Frequency	Percent
≤ 30	9	9.0
31-35	8	8.0
36-40	23	23.0
41-45	37	37.0
46-50	12	12.0
≥51	11	11.0
Total	100	100.0

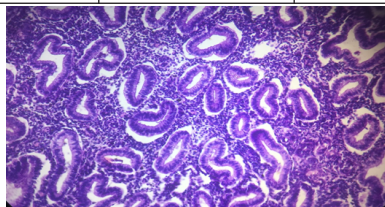


Figure 1:Endometrial hyperplasia without atypia.

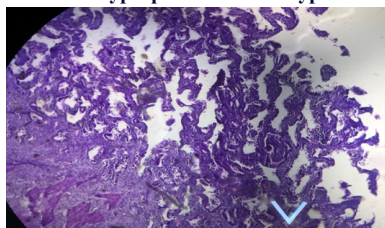


Figure 2: Endometrial Hyperplasia with Atypia showing complex glands with papillary projections and cellular atypia (HE stain, X10)

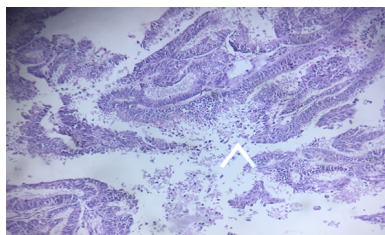


Figure 3: Endometrial Carcinoma showing malignant glands with neoplastic cells (H E stain, X40)

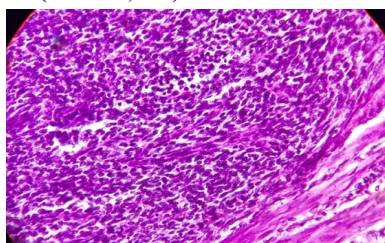


Figure 4: Endometrial Stromal Sarcoma showing Infiltrative and diffuse proliferation of uniform round or oval cells (H E stain, X40)

DISCUSSION:

The study done by Doraiswami S et al [2], they found that the most common age group presenting with AUB was 41–50 years (33.5%). The commonest pattern in these patients was normal cycling endometrium (28.4%). The commonest pathology irrespective of the age group was disordered proliferative pattern (20.5%). Other causes identified were complications of pregnancy (22.7%), benign endometrial polyp (11.2%), endometrial hyperplasias (6.1%), carcinomas (4.4%) and chronic endometritis (4.2%).

The study done by Baral R et al. [5] found that 73 (50%) were normal, 34(23%) had abnormal physiologic changes and 13 (9%) had pregnancy related complications and benign changes. In the age group between 40 – 55 years, abnormal physiological changes, benign conditions and normal physiological changes were 45 (32%), 41 (29%) and 37 (26%) respectively. In the age group > 55 years, there were 3(21%) malignant and 3(21%) benign conditions. There were 5(36%) unsatisfactory samples in this age group.

One more study done in a Hospital in North Central Nigeria by Ifeyinwa M. A et al [6], they found that the mean age of cases of endometrial hyperplasia was 38.3 years with a range of 22-62 years. Most of the cases of endometrial hyperplasia were typical (41cases). Majority (61%) of the typical endometrial hyperplasia fall in the age group of 18-40 years, while 13 cases (31.7%) were found in the range of 41-50 years. Each of the age groups, 18-40 and 41-50 years, account for 4 cases of atypical endometrial hyperplasia. Most of the cases of endometrial polyp are found in the age group of 30-50 years which accounted for 41 cases (85.4%). Only 3 cases of endometrial polyp were found in women above 50 years of age.

The study done by Pratibha Singh [7], she found that most cases were between 46 and 50 years of age followed by 41–45 years. No cases were below 25 or more than 65 years of age. Heavy menstrual bleeding was the most common presentation of AUB. Adequate samples were obtained in 86% of cases while 13.9% of cases' sample was inadequate for opinion; atrophic endometrium was the most common cause for inadequate sample. Uterine malignancy was diagnosed in three cases.

One more study done by Jetley, *et al* [8]: Endometrial pathology in middle aged females with AUB, they found that Secretory endometrium seen in 71 cases (32.4%) was the most common. While proliferative endometrium was the second most common diagnosis; seen in 67 patients (30.5%). Endometrial hyperplasia was seen in 24 (10.9%) cases out of which simple hyperplasia without atypia was seen in 19, complex hyperplasia without atypia was seen in 4 and complex hyperplasia with atypia was seen in 1 case. The other diagnoses, which accounted for the rest of the functional causes of atypical uterine bleeding, were disordered proliferative endometrium 15 cases (6.8%), luteal phase defects 3 cases (1.3%).

CONCLUSION:

The results of our study are comparable to current published data. We concluded that most common age group having AUB were 41-50 years and as age increases risk of malignancy increases. Therefore any cases with postmenopausal bleeding should be investigated carefully to rule out malignancy. It is important to know the histological pattern of the endometrium in abnormal uterine bleeding in different age groups since it will help in the management of the cases.

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