

Original article :

Study of Abnormal Uterine Bleeding in Endometrium by Histopathological Findings in Perimenopausal Women

Dr. Prasanna Kumar A. J.

Associate Professor, Department of Pathology, Dhanalakshmi Srinivasan Medical College and Hospital, Perambalur, Tamil Nadu, India.

Corresponding Author: Dr. Prasanna Kumar A. J., Associate Professor, Department of Pathology, Dhanalakshmi Srinivasan Medical College and Hospital, Perambalur, Tamil Nadu, India.

Abstract

Background: Abnormal uterine bleeding (AUB) commonly occurs in aged women, which has significant morbidity in that it obstruct with their family pattern, personality development and social living. AUB occurs approximately in 9-30% women of reproductive age when suffer from menorrhagia. The aim of this study was to evaluate the various histological & pathological patterns of endometrium, in perimenopausal women with abnormal uterine bleeding.

Materials & Methods: This is a prospective study were carried out in the Department of Pathology, Dhanalakshmi Srinivasan Medical College and Hospital, Perambalur, Tamil Nadu, India. 200 patients were selected for the study. Written Informed consent was obtained from all participants. Women with abnormal uterine bleeding more than 40 years of age were included in study. Endometrial curettage samples were fixed in 10% formalin and histopathological slides were prepared and Hematoxyline and Eosin staining was done.

Results: It was observed that proliferative endometrium was the most common finding (37%) followed by secretory endometrium (31%) in reproductive age group. Results showed out of 200, 18 cases (9%) with simple hyperplasia, out of which 16 cases (8%) cases shows simple without atypia type of hyperplasia & 2 cases (1%) shows simple with atypia. Out of 200 cases, 126 cases were from Above Poverty Line (APL) (63%) and 74 cases were from Below Poverty Line (BPL) (37%).

Conclusion: It can be concluded that abnormal uterine bleeding due to endometriosis were seen in perimenopausal group of women. This is very crucial to know the histological pattern of the endometrium in AUB in various age groups since it will support in the management of the patients.

Keywords: Reproductive Age, Abnormal Uterine Bleeding, Endometrium.

INTRODUCTION

Abnormal uterine bleeding is most common gynaecological problems in women, which has significant morbidity in that it interferes with their personality development, family pattern and social life.

Menstruation is defined as a 'periodic and cyclical shedding of progestational endometrium accompanied by bloodloss' during the reproductive age of women. Perimenopause stage, onset of menopause, generally appear

around 40 years of age during which the regular menstrual cycle of a woman changes from normal adoration cycles to a design of irregular cycles.^{1,2} Irregular menstrual period must be carefully evaluated to determine whether it is the consequence of low oestrogen levels or an associated pathology in some women³.

In advanced age of women, the unrevealed disease can be diagnosed by histological differential of endometrium, the menstrual phase, and use of any

exogenous hormones. Pregnancy-related and dysfunctional bleeding in uterus was commonest in reproductive age group, whereas organic lesions and atrophy become frequently in older patients. The etiology of AUB is purely hormonal level of estrogen rises in circulating blood may be induced by the hypertrophy and hyperplasia of the endometrium⁴.

Recently the commonly used diagnostic methods for evaluate the endometrium by biopsy, hysteroscopy, and Trans Vaginal Ultrasound (TVS). Endometrial biopsy considered the gold standard in AUB by dilatation and curettage of endometrium. The aim of this study was to assess the abnormal uterine bleeding by various histopathological patterns of endometrium in above 40 years of age groups of women.

MATERIALS & METHODS

This is a prospective study, which was carried out in the Dept. of Pathology, Dhanalakshmi Srinivasan Medical College and Hospital, Perambalur, Tamil Nadu, India. 200 patients were selected for the study after satisfying the following inclusion and exclusion criteria.

Inclusion Criteria

Women with abnormal uterine bleeding more than 40 years of age.

Exclusion Criteria

1. Women with cervical cancer.
2. Abnormal uterine bleeding cases suffering from fungal infection
3. Abnormal uterine bleeding due to cervical & vaginal causes
4. Any hemostatic disorders.

All participants had given written consent. They underwent detailed history taking including the bleeding pattern, general, systemic, and pelvic

examination. Endometrial curettage samples were fixed in 10% formalin and histopathological slides were prepared and Hematoxyline and Eosin staining was done. Paraffin embedded tissues were blocked in paraffin with the help of moulds. 4-6 μ thick sections were cut, these slides were kept in hot oven at 66⁰C for one hour to fix the section on slides and H&E staining was done.

The histopathological findings were classified as functional causes included physiological cyclical changes (proliferative and secretory phases, disordered proliferative endometrium, atrophic and weakly proliferative endometrium, nonspecific degenerative changes). Organic causes (endometrial polyp, chronic endometritis, hyperplasia, carcinomas and pregnancy related complications).

RESULTS

The present study showed maximum cases seen proliferative endometrium (37%) followed by secretory endometrium (31%) in perimenopausal age group of women (table 1). Results showed out of 200, 18 cases (9%) with simple hyperplasia, out of which 16 cases (8%) cases shows simple without atypia type of hyperplasia & 2 cases (1%) shows simple with atypia. 11 cases out of 200 with complex hyperplasia, out of which 8 cases (4%) complex with atypia type of hyperplasia & 3 cases (1.5%) complex without atypia type (table 2).

DISCUSSION

AUB is may be due to hyperplasia, malignancy, infections and hormonal effects in endometrium.⁵

The present study observed high incidence of AUB was noted in above 40 years of age groups of women. In menopause stages, which cannot keep the normal endometrium growing due to reduced number of ovarian follicles and their increased

resistance of stimulation to gonadotrophic hormones, it can be due to reduce of estrogen level.⁶⁻⁸ This pattern was commonly found in the late reproductive and perimenopausal women in our study. The correlation of these finding of changes in proliferation of endometrium as a main cause of abnormal uterine bleeding is comparable with Anuradha Salvi et al⁹ (37.2%) and Agrawal et al¹⁰.

A various worker Kanakadurgamba et al (1964)¹¹ reported 44%. Naheed (1997)¹² reported 12.6 %, Ayesha (2005)¹³ reported 15.5% Rajesh (2013)¹⁴ reported 20.53% and Vijaikumar (2014)¹⁵ reported 16.82% in the age group between 21-30 years.

Das and Chugh (1964)¹⁶, Bhattacharji (1964)¹⁷ and Rajesh (2013)¹⁴, Abid M (2014)¹⁸ and Supriya et al (2014)¹⁹ have reported highest incidence in 31-40 years of age. The incidence during childbearing period may be high due to seek medical care readily than other age groups.

In the Sutherland series incidence of AUB in reproductive period was 56.8%.²⁰ In Naheed series, the incidence of AUB in the reproductive age group was 50%.¹⁵ The present study showed maximum cases seen proliferative endometrium (37%) followed by secretory endometrium (31%). This is may be due to peak effect of hormonal disturbances as premenopausal age group patients are usually receiving HRT for different menopause related criticism, these findings were similar with Sarwaret al.¹³ A various worker had similar results Naheed (1997)¹², Sadia Khan (2011)²¹, Vaidya (2013)²²,

Rajesh (2013)¹⁴ and Supriya (2014)¹⁹ reported maximum case of proliferative phase in AUB patients.

The incidence of endometrial hyperplasia in the present study was 9% which is agreeable with those of, Sutherland (15.5%)²⁰ and Abid M (5%).¹⁸

Endometrium hyperplasia in consisting of glands lined by cytologically bland, proliferative, mitotically active epithelium and pseudostratified in normal proliferative tissue. Unstable proliferative pattern of the endometrium in one end that includes carcinoma at the other end with interceding stages of hyperplasias.²³

Only atypical endometrial proliferation was clearly confined with the occurrence of adenocarcinoma. If not treated, approximated 8% of women with atypical simple type of hyperplasia will may be proceed to carcinoma, whereas the advance rate of complex type of atypical hyperplasia is approx 30% in women, and as raised as 52% proceed to carcinoma.²⁴

Treatment of abnormal uterine bleeding is not complete without the diagnosis of tissue endometrium, especially in perimenopausal women and post-menopausal women.²⁵

CONCLUSION

It can be concluded that abnormal uterine bleeding due to endometriosis were seen in perimenopausal group of women. This is very crucial to know the histological pattern of the endometrium in AUB in various age groups since it will support in the management of the patients.

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Table 1: Types of Endometrial Patterns

Type of Endometrium	No. of cases	Percentage
Proliferative Endometrium	74	37.0
Secretory Endometrium	62	31
Simple Hyperplasia	18	9
Complex hyperplasia	11	5.5
Endometritis	4	2
Endometrial Polyp	1	0.5
Menstrual Phase	14	7
Mixed phase	4	2
Unsatisfactory	12	6
Total	200	100%

Table 2: Types of Hyperplasia

Types of Hyperplasia	No. of cases	Percentage
Simple without Atypia	16	8%
Simple with Atypia	2	1%
Complex without Atypia	3	1.5%
Complex with Atypia	8	4%