

Original Research Article


Histopathological examination of endometrium in menorrhagia patients

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Abstract

Introduction: Menorrhagia is one of the commonest clinical conditions for which patients seek advice in the gynecological outpatient department.

Aim and objectives of study: To determine the prevalence of various histopathological changes, patterns and lesions of endometrium associated with menorrhagia in the women of different age groups; to describe the morphological features of various lesions of endometrium; to assess demographic pattern of various types of endometrium lesions in this part of our country and to do clinicopathological correlation and give diagnosis based on it.

Materials and methods: This was a prospective, non-interventional and observational hospital based crosssectional one year study carried out between January 2020 to June 2021 in Histopathology Department of Dhiraj Hospital on 52 cases of D & C and hysterectomy specimens. All the specimens were fixed in 10% formalin were received in the department of Pathology and processed and embedded in paraffin wax. Multiple serial sections of 4-5 microns thickness were obtained from the paraffin block and then stained with H & E. Detailed study of the sections was done by light microscopy.

Results: 52 cases of menorrhagia were studied clinically and histopathologically. In present study, large proportion of patients with menorrhagia showed proliferative endometrial pattern (38.46%) followed by secretory phase (34.62%). Hyperplastic pattern was seen in 13.46% of patients. Non hyperplastic endometrial pattern was more common than hyperplastic pattern. Simple hyperplasia was more commonly seen than complex and atypical hyperplasia. Overall incidence of atypical hyperplasia was low (28.57%) and atrophic endometrium seen in 5.7% of cases. Endometrial polyp was seen in 3.84% cases and endometrial carcinoma was seen in 3.84% cases.

Conclusion: Histopathological study of endometrium is very useful to reveal different endometrial patterns in menorrhagia and to distinguish between anovulatory and ovulatory causes. It is also useful for the diagnosis of endometrial hyperplasia and endometrial carcinoma.

Key words

Histopathology, Endometrium, Menorrhagia.

Introduction

The female genital tract is hormone responsive system to a degree unmatched by any other system in the body. The gross configuration of uterus changes dramatically throughout the life. It is the kind of “Puppet on a string”, thus manipulated throughout life by changing levels of ovarian hormones [1]. The endometrium is an endocrine organ that responds to circulating blood levels of estrogen and progesterone. Cyclical uterine bleeding, which begins in anatomically and physiologically normal female, marks an important stage of reproductive maturation [2, 3]. Normal menstruation is defined as bleeding from the secretory endometrium associated with ovulatory cycle not exceeding a length of 5 days [4]. Menorrhagia is one of the commonest clinical conditions for which patients seek advice in the gynecological outpatient department. It is estimated that 9- 30% of women of reproductive age suffer from menorrhagia. The prevalence increases with age, peaking just prior to menopause. Because most cases are associated with anovulatory menstrual cycles, adolescent and perimenopausal women are particularly vulnerable [5]. Menorrhagia is defined as bleeding occurs at normal intervals (21 to 35 days) but with heavy flow or duration. It is essential to perform thorough clinical examination of abdomen and pelvis, hysteroscopy if required to rule out any organic diseases of uterus [6].

Aim

- To determine the prevalence of various histopathological changes, patterns and lesions of endometrium associated with menorrhagia in the women of different age groups.

Objectives

- To describe the morphological features of various lesions of endometrium.
- To assess demographic pattern of various types of endometrium lesions in this part of our country.
- To do clinicopathological correlation and give diagnosis based on it.

Materials and methods

Study design and setting:

This was a study of endometrium in women with complaint of menorrhagia conducted at the Department of Pathology, SBKS MI and RC, Waghodia, Vadodara. The present study included 52 endometrial tissue specimens studied by histological examination. Endometrial tissue was obtained by D&C and hysterectomy.

Study period:

The study period was from January 2020 to June 2021.

Inclusion criteria:

- Patients of all age groups clinically diagnosed as Menorrhagia.

Exclusion criteria:

- Patients presenting with menorrhagia due to pregnancy related complications.
- Organic lesions involving the genital tract and organs like leiomyomas and adenomyosis, genital tract infection, systemic causes, iatrogenic causes like intrauterine contraceptive device, exogenous hormones and other lesions.
- Autolyzed specimen.

All the specimens were fixed in 10% formalin were received in the department of Pathology and processed and embedded in paraffin wax.

Multiple serial sections of 4-5 microns thickness were obtained from the paraffin block and then stained with H & E. Detailed study of the sections were done by light microscopy.

Results

In present study, we had obtained the endometrial specimens by D & C and hysterectomy. We had not received any specimen by endometrial biopsy during present study period. Out of 52 endometrial tissue specimens studied, 5.77% specimens were received through Dilatation and Curettage procedure and 94.23% specimens were received through Hysterectomy procedure. Largest number of patients was in age group 41-50 years (53.85%). Next major group belonged to 31-40 years (30.77%). The percentage of patients in 21-30 years was 9.61%. The percentage of patients in 51-60 years was 5.77%. Incidence of menorrhagia was maximum in 41-50 years and least in 21-30 years.

In present study, proliferative phase was most common endometrial pattern found in 38.46% cases. Secretory phase was second most common pattern found in 34.62% cases and hyperplasia was seen in 13.46% cases. Atrophy of endometrium was present in 5.70% cases. Endometrial polyp was seen in 3.84% cases and endometrial carcinoma was seen in 3.84% cases.

In present study, classification of endometrial hyperplasia is based on WHO classification of endometrial hyperplasia 2003. Most common finding was simple hyperplasia (57.14%), followed by Atypical hyperplasia (28.57%). Complex hyperplasia was found in 14.29% cases only. Between age group 21-30 years, there were 5 cases. Out of which, 4 cases were (80.0%) of proliferative phase, 1 case (20.0%) was of secretory phase. Between age group 31-40 years, there were 16 cases. Out of which, 07 cases (43.7%) of proliferative phase, 7 cases (43.7%) of secretory phase, 2 cases (12.6%) of simple hyperplasia. Between age group 41-50 years, there were 28 cases. Out of which, 9 cases (32.1%) of proliferative phase, 11 cases (59.3%)

of secretory phase, 1 case (3.6%) of simple hyperplasia, 1 case (3.6%) of complex hyperplasia, single case (3.6%) of atypical hyperplasia. and 2 cases (7.1%) of atrophic endometrium, 2 cases (7.1%) of endometrial polyp, single case (3.6%) of endometrial carcinoma.

Discussion

52 cases of menorrhagia were studied clinically and histopathologically. Hysterectomy (94.23%) was the commonest mode by which endometrium was obtained. Patients belonging to various age group were studied. Maximum numbers of menorrhagia patients were in age group 41-50 years (53.85%) while minimum incidence was in age group 51-60 years (5.77%).

In present study, large proportion of patients with menorrhagia showed proliferative endometrial pattern (38.46%) followed by secretory phase (34.62%). Hyperplastic pattern was seen in 13.46% of patients. Non hyperplastic endometrial pattern was more common than hyperplastic pattern. Simple hyperplasia was more commonly seen than complex and atypical hyperplasia. Overall incidence of atypical hyperplasia was (28.57%) and atrophic endometrium seen in 5.7% of cases. Endometrial polyp was seen in 3.84% cases and endometrial carcinoma was seen in 3.84% cases.

Atrophic endometrium was common finding in 40 years age group as a cause of menorrhagia.

Total 3 patients were studied in postmenopausal state (51-60 years), out of which 1 had atrophic endometrium and 1 had atypical hyperplasia of endometrium and 1 had carcinoma of endometrium.

Conclusion

Histopathological study of endometrium is very useful to reveal different endometrial patterns in menorrhagia and to distinguish between anovulatory and ovulatory causes. It is also useful for the diagnosis of endometrial

hyperplasia and endometrial carcinoma. It is important to evaluate each and every case of menorrhagia histologically to exclude organic pathology which mimics dysfunctional uterine bleeding like endometrial polyp, chronic endometritis or endometrial carcinoma etc.

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