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Histopathological Study of Endometrial and Cervical Changes in Hysterectomy Specimens of Perimenopausal Age

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Abstract

Introduction: Numerous terminologies are used to describe abnormal uterine bleeding- menorrhagia, metrorrhagia, polymenorrhea, oligomenorrhea, intrmenstrual and postcoital bleeding [6]. The spectrum of cervical changes in perimenopausal age ranges from cervicitis to dysplasia to frank malignancy. *Methodology:* A total of 415 hysterectomy specimens of perimenopausal age group received at Department of Pathology, Hassan Institute of medical sciences, Hassan between the period of January 2015 and December 2016 were included. *Results*: The predominant histomorphological pattern in endometrium was proliferative phase (48.43%). Endometrial hyperplasia was seen in 72 cases, out of which atypia was seen in 6 cases. In 7 cases endometrial polyps were seen. 6 cases (1.44%) showed endometrial carcinoma. *Conclusion:* other than malignant lesions, benign neoplastic and non-neoplastic lesions should also be considered in the evaluation of abnormal uterine bleeding cases

Keywords: Hysterectomy; Histopathology; Endometrium.

Introduction

Perimenopause is the transistional phase where the body of women shifts naturally from menstrual cycles to menopause [1].The average age of menopause is 49+/- 3.6 years [2]. Anovulatory cycles are commonly seen in perimenopausal age. This results in endometrial changes causing irregular uterine bleeding [3]. In these perimenopausal years the frequently encountered problem is abnormal uterine bleeding [4]. Both dysfunctional uterine bleeding and erratic bleeding due to hormonal causes, structural causes such as fibroids, polyps, carcinomas and infections comprise the etiological factors of abnormal uterine bleeding [5]. Numerous terminologies are used to describe abnormal uterine bleeding- menorrhagia, metrorrhagia, polymenorrhea, oligomenorrhea, intrmenstrual and postcoital bleeding [6]. The spectrum of cervical changes in perimenopausal age ranges from cervicitis to dysplasia to frank malignancy.

In gynaecology one of the most common surgical operations is hysterectomy [7]. It can be done either by vaginal or abdominal approach [8]. Our study, to know the cervical and endometrial changes in perimenopausal women in hysterectomy specimens was done.

Aims and Objectives

1. To know the spectrum of endometrial changes in perimenopausal age group.
2. To know the spectrum of cervical changes in perimenopausal age group.

Materials and Methods

A total of 415 hysterectomy specimens of perimenopausal age group received at Department of Pathology, Hassan Institute of medical sciences, Hassan between the period of January 2015 and December 2016 were included.

Inclusion Criteria

All hysterectomy specimens of women between 40 to 55 years.

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Exclusion Criteria

Hysterectomy specimens of women less than 40 years and more than 55 years, endometrial and cervical biopsies were not included. The hysterectomy specimens were fixed in 10% formalin and then processed for microscopical examination. The data collected was analysedusing SPSS 17 software.

Results

A total of 415 perimenopausal women in the age group of 40 to 55 years underwent hysterectomy over a period of 2years at Hassan Institute of Medical Sciences.

Evaluation of cervix revealed various different patterns on histopathological examination of hysterectomy specimens (Table 2). The most common pattern seen was chronic cervicitis (64.3%) followed by chronic polypoidalendocervicitis (21.68%). 21 cases showed dysplastic changes in cervix and frank carcinoma in 17 cases (4.09%).

The predominant histomorphological pattern in endometrium was proliferative phase (48.43%). Endometrial hyperplasia was seen in 72 cases, out of which atypia was seen in 6 cases. In 7 cases endometrial polyps were seen. 6 cases(1.44%) showed endometrial carcinoma.

Table 1: Age Distribution

Age (Years)	Frequency	Percentage
40-45	224	53.98%
46-50	96	23.13%
51-55	95	22.89%
TOTAL	415	100%

Table 2: Histomorphological changes in cervix in perimenopausal women

Cervical Changes	Frequency	Percentage
Chronic cervicitis	267	64.34%
Chronic polypoidalendocervicits	90	21.68%
Chronic cervicitis with squamous metaplasia	19	4.57%
CX POLYP	1	0.24%
Mild Dysplasia	13	3.13%
Moderate dysplasia	6	1.44%
Severe dysplasia	2	0.48%
Carcinoma cervix	17	4.09%
TOTAL	415	100%

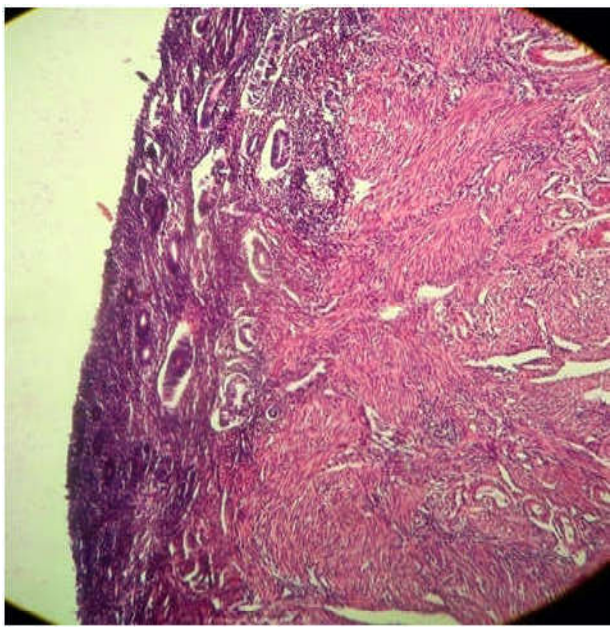

Fig. 1: Atrophic endometrium, H&E, 400X

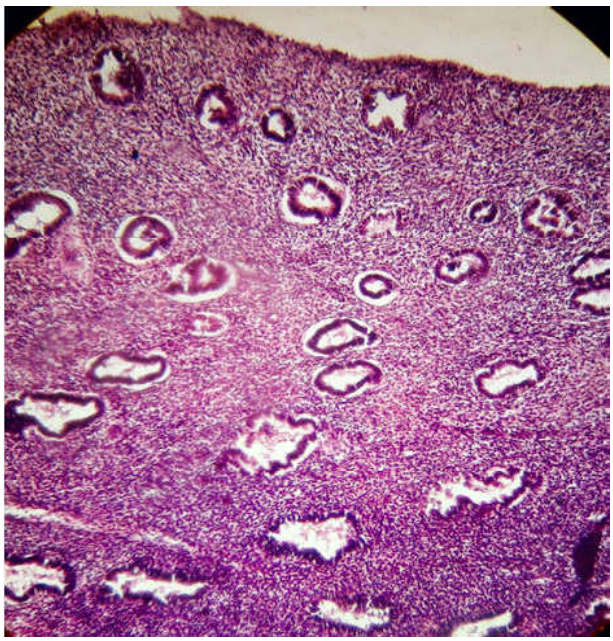

Fig. 2: Proliferative phase, H&E, 400X

Table 3: Histomorphological changes in endometrium in perimenopausal women

Endometrial Changes	Frequency	Percentage
Proliferative phase	201	48.43%
Secretory phase	64	15.42%
Cystoglandular hyperplasia	19	4.57%
Cystic atrophy	61	14.69%
Endometrial hyperplasia without atypia	47	11.32%
Endometrial hyperplasia with atypia	6	1.44%
Endometrial polyp with proliferative phase	3	0.72%
Endometrial polyp with atrophy	1	0.24%
Endometrial polyp with endometrial hyperplasia	1	0.24%
Adenomyomatous polyp	2	0.48%
PILL endometrium	1	0.24%
Endometritis	3	0.72%
Endometrial carcinoma	6	1.44%
Total	415	100%

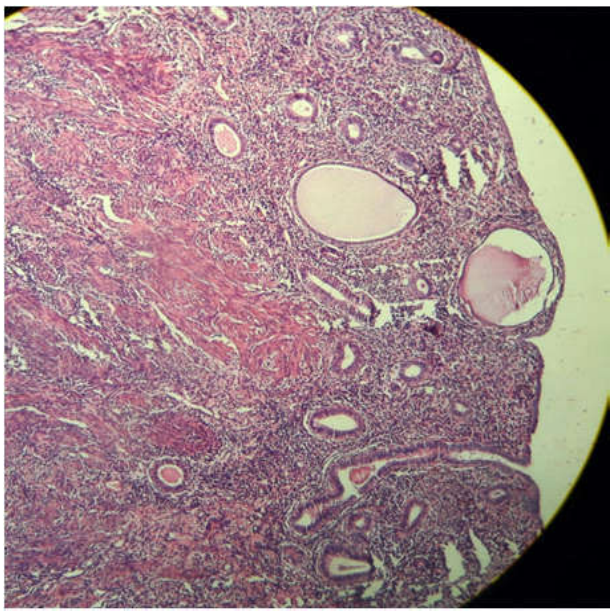

Fig. 3: Senile cystic atrophy, H&E, 400X

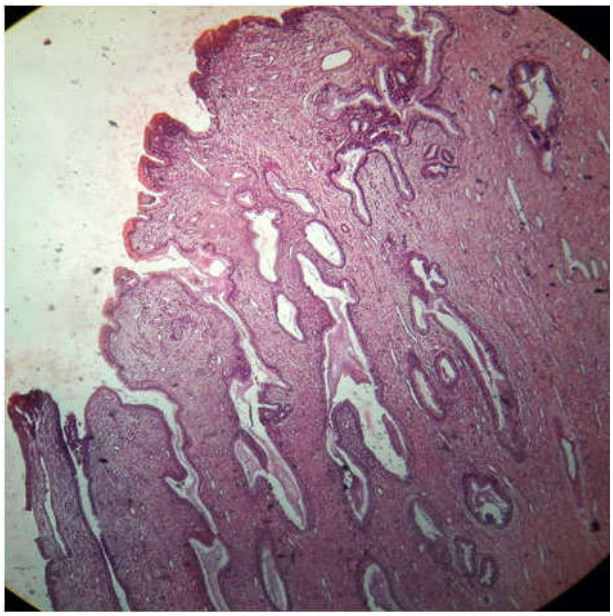

Fig. 4: Chronic Polypoidal Endocervicitis, H&E, 400X

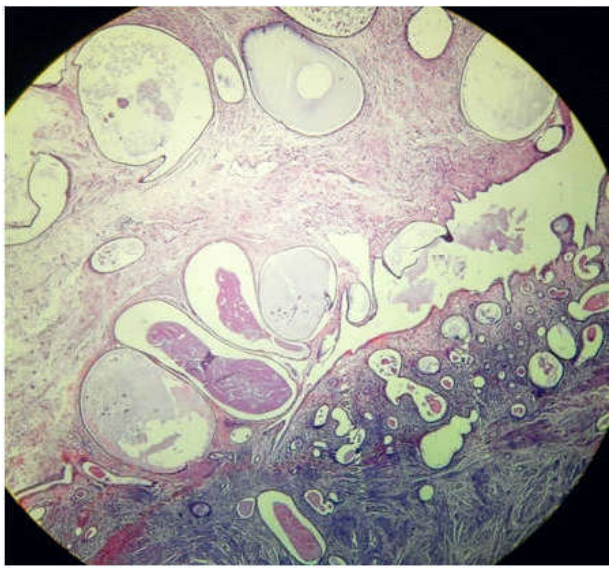

Fig. 5: Cystoglandular hyperplasia, H&E, 400X

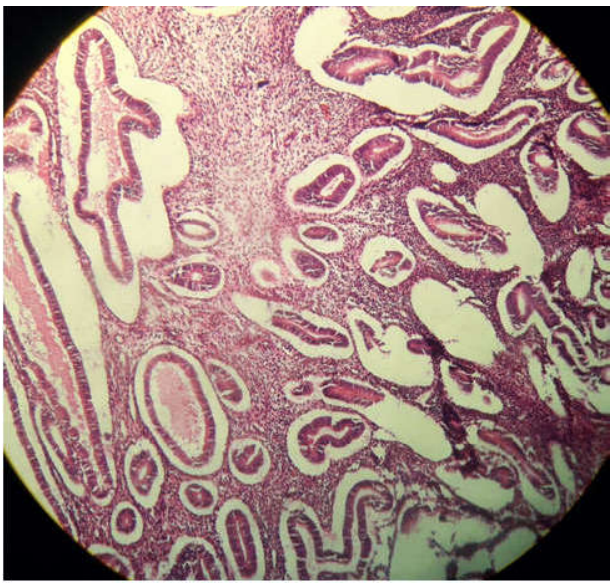

Fig. 6: Endometrial hyperplasia, H&E, 400X

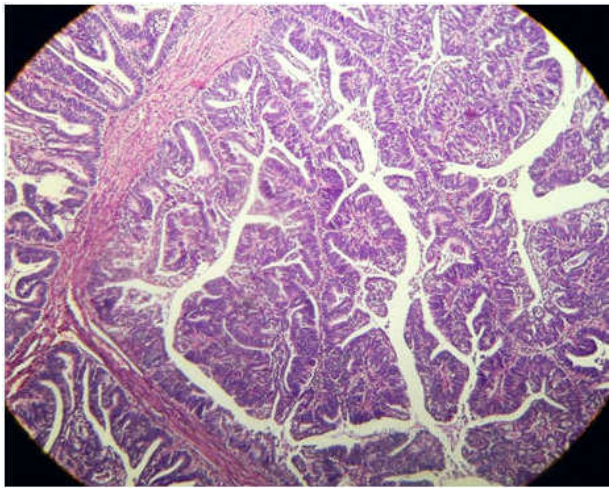

Fig. 7: Endometrial carcinoma, H&E, 400X

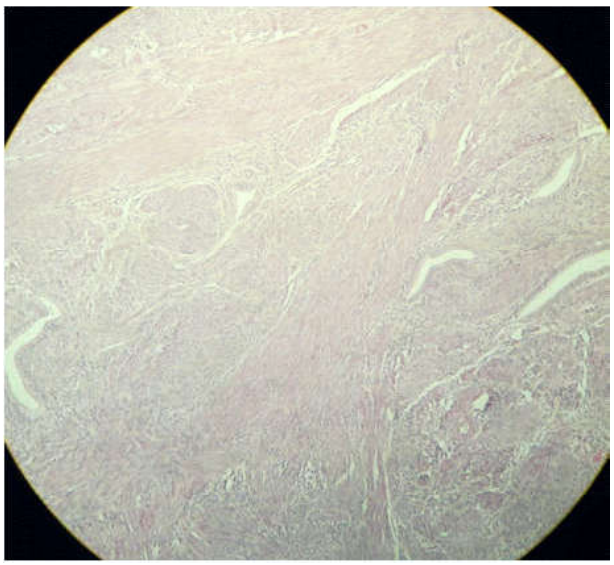

Fig. 8: Adenomyomatous polyp, H&E, 400X

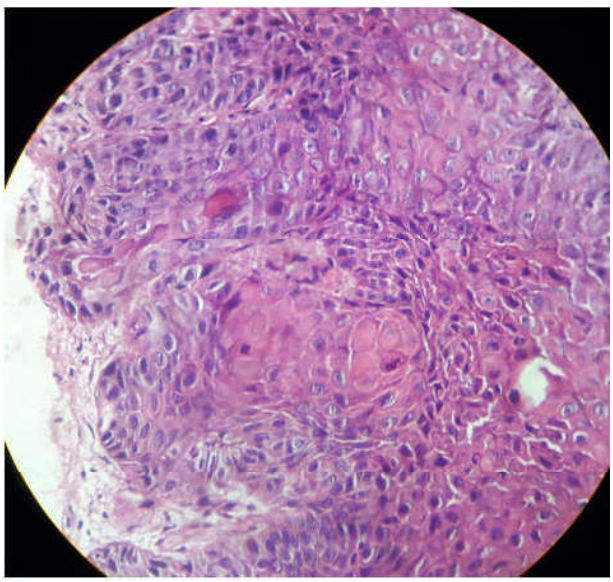

Fig. 9: Squamous cell carcinoma-cervix, H&E, 400X

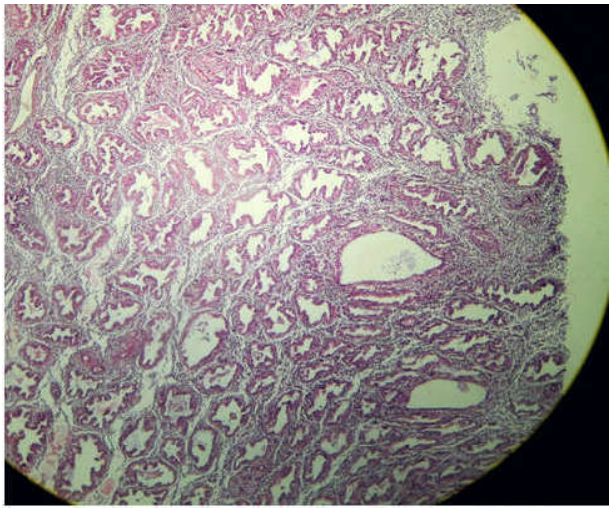

Fig. 10: Secretory phase, H&E,400X

Discussion

Perimenopause also called menopausal transition marks the end of reproductive years in a woman [9]. This stage usually occurs between 40- 55 years. Majority of the gynaecological consultations take place during this phase [10]. In this period ovaries will be in an unstable responsive stage, which leads to abnormal irregular uterine bleeding [11]. Also erratic secretion of hormones i.e. estrogen and progesterone occurs in this age group [12]. In our study, the frequencies of various histomorphological changes occurring in endometrium and cervix of perimenopausal women were recorded.

In the present study majority of the hysterectomy specimens received were 224(53.98%) in age group 40-45 years which was in correlation with a study done by Ganiga et al [8].

The most common finding in endometrium was proliferative phase(48%) in our study which was in concordance with Ganiga et al [8] (42%). Swami et al [13] conducted a study in 2015 where secretory phase was the most common finding (24.7%). This was in discordance with our study.

Perimenopause is a time of endogenous ovarian hyperstimulation resulting in high estrogen levels coupled with characteristically intermittent ovulation. This prolonged unremitting estrogen stimulation results in endometrial hyperplasia. Endometrial hyperplasia is most commonly seen during the perimenopausal period [14]. In our study we encountered 72 cases of endometrial hyperplasia.

Carcinoma of the endometrium is the most common gynaecological malignancy, typically occurs in elderly individuals. This more commonly occurs as a result

of excess estrogenic stimulation and develops against a background of endometrial hyperplasia [15]. 6 cases of endometrial carcinoma was seen in the present study, of which majority belong to Type 1(endometroid) category.

We also encountered 2 cases of Adenomyomatous polyp having smooth muscle fibres in addition to the customary glands and stroma. These tend to occur in perimenopausal period and present with abnormal uterine bleeding [16].

Evaluation of cervix revealed chronic cervicitis (64.34%) followed by polypoidalendocervicitis (21.68%) as the most frequent change which concurred with Ganiga et al [8] study(45%).

Conclusion

We conducted our present study with an objective to know the spectrum of changes in endometrium and cervix that can be present in women of perimenopausal age group. We inferred that other than malignant lesions, benign neoplastic and non-neoplastic lesions should also be considered in the evaluation of abnormal uterine bleeding cases. These patients are amenable to simple non- surgical treatments.

References

1. Jetley S,Rana S,Jairajpuri ZS. Morphological spectrum of endometrial pathology in middle-aged women with atypical uterine bleeding: A study of 219 cases.J Midlife Health. 2013 Oct-Dec;4(4):216–220.
2. Mallick A, Behera R, Subudhi K. Histopathological study of endometrium in postmenopausal bleeding. Journal of evolution of medical and dental sciences 2013;2(46):9010-9018.
3. Todovoric N, Djordjevic V, Antonijevic S. Results of histopathologic findings of endometrial changes in metrorrhagia. SrpArhCelokLek 2002;130:386-8.
4. Ely JW, Kennedy CM, Clark EC, Bowdler NC. Abnormal Uterine Bleeding: A Management Algorithm. J Am Board Fam Med. 2006;19:590–602.
5. Bhatta S, Sinha AK. Histopathological study of endometrium in abnormal uterine bleeding. Journal of pathology of Nepal. 2012;2:297-300.
6. Mahmoud MM, Rifat AG. Endometrial histopathological changesin women with abnormal uterine bleeding in Kirkuk city, a clinicopathological study. Medical journal of Babylon. 2013; 10(3):567-82.
7. Saleh S, Fram K. Histopathology diagnosis in women who underwent a hysterectomy for a benign condition. Arch gynaecolobstect. Nov 2011;17-20.
8. Ganiga P, Patil G. Retrospective study of histopathological of cervix in hysterectomy specimen of women with perimenopausal bleeding. Indian journal of applied research, 2016 oct;6(10):13-4.
9. Devi L S, Singh M R, Singh L R, Debnath K. The histological and histochemical study of endometrium in dysfunctional uterine bleeding. J Med Soc 2012;26:167-70.
10. Mahajan N, Aggarwal M, Bagga A. Health issues of menopausal women in North India. J Midlife Health. 2012;3:84–7.
11. Wren BG. Dysfunctional uterine bleeding. AustFam Physician 1998;27:371-7.
12. Mitra K, Chowdhury MK. Histological and histochemical study of endometrium in dysfunctional uterine haemorrhage. J Indian Med Assoc 2003;101: 484-5.
13. Swami Y, Swami M,Sharma P. Histopathological evaluation of endometrium in pre and postmenopausal uterine bleeding. Indian journal of obstetrics and gynaecology research 2015;2(4):264-9.
14. Rosai J. Rosai and Ackerman's Surgical Pathology. 9th ed. Mosby; 2004.p.1780.
15. Rose PG. Endometrial carcinoma. N Eng J Med 1996; 335:640-9.
16. GilksCB, Clement PB, Hart WR, Young RH. Uterine adenomyomas excluding atypical polypoidala-denomyomas of endocervical type: a clinicopathological study of 30 cases of an underemphasized lesion that may cause diagnostic problems with brief consideration of adenomyomas of other female genital tract sites. Int J Gynaecolpathol 2000;19:195-205.