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Endometrial Evaluation by Histopathology in Abnormal Uterine Bleeding in Perimenopausal and Postmenopausal Patients

Kairavi Desai[1*], Kiran P. Patole[2] and Manasi Kathaley[3]

[1]Senior Resident, Department of Obstetrics and Gynaecology, Dr. Vasantrao Pawar Medical College and Research Centre, Nashik, India; kairavi.kd@gmail.com

[2] Professor & HOD, Department of Obstetrics and Gynaecology, Dr. Vasantrao Pawar Medical College, Hospital and Research Centre, Nashik, India; kpatole@hotmail.com

[3]Professor, Department of Obstetrics and Gynaecology, Dr. Vasantrao Pawar Medical College and Research Centre, Nashik, India; manasihk65@gmail.com

Abstract

Introduction: Abnormal Uterine Bleeding (AUB) is an important symptom of both benign and serious gynaecological diseases. Abnormal perimenopausal or postmenopausal bleeding is associated with endometrial carcinoma in approximately 10% of cases. The present study is designed to study the histopathological results of the endometrial biopsy in women with abnormal perimenopausal and postmenopausal uterine bleeding. **Aims and Objectives:** To study, the various histopathological patterns of endometrium, in patients with abnormal uterine bleeding, those are in perimenopausal and postmenopausal age group. **Materials and Methods:** In all 100 patients were selected for the study after satisfying the specific inclusion and exclusion criteria. They underwent detailed history taking including the pattern of bleeding associated with general, systemic, and pelvic examination. They were subjected to routine laboratory investigations and pelvic ultrasound examination. Endometrial biopsy was done irrespective of endometrial thickness. Endometrial biopsy was done in OPD without anaesthesia. Biopsy was performed using a manual vacuum aspiration syringe, and the material collected was sent for histopathological examination. Endometrium was also obtained from patients undergoing diagnostic or therapeutic dilatation and curettage. Analysis of Histopathology report was done and results were obtained. **Results:** Most predominant findings of histopathological examination were the ... •Proliferative Endometrium in 29% •Simple hyperplasia without atypia 28% •Secretory 20% •Followed by other patterns **Conclusion:** Study of endometrial histopathology in perimenopausal and postmenopausal women with abnormal uterine bleeding is helpful to diagnose hyperplasia and carcinoma of endometrium.

Keywords: Postmenopausal Uterine Bleeding, Simple Hyperplasia without Atypia, Secretory

1. Introduction

Perimenopause is the phase, preceding the onset of menopause, generally occurring around 40 years of age during which the regular menstrual cycle of a woman changes from normal adulatory cycles to a pattern of irregular cycles[1,2]. Menopausal transition includes a period of about 4–5 years before menopause, sometimes even several months, characterized by varying degrees of somatic and psychological changes that reflect the change in the ovarian cycle[3]. In some women, the most significant symptom is an irregular menstrual period, which must be carefully evaluated to determine whether it is the consequence of low oestrogen levels or an associated pathology[4].

The terminology of abnormal uterine bleeding includes the following clinical entities[2,5,6] Oligomenorrhea, Polymenorrhea, Menorrhagia, Menometrorrhagia, Metrorrhagia, Midcycle spotting, and dysfunctional uterine bleeding.

*Author for correspondence

Abnormal Uterine Bleeding (AUB) is an important symptom of both benign and serious gynaecological disease. AUB is the single most common reason for gynaecological referral[7]. Excessive menstrual blood loss affects 10–30% of menstruating women and in the order of 70% of all gynaecological consultations in the Perimenopause and Postmenopause[8]. Abnormal perimenopausal or postmenopausal bleeding is associated with endometrial carcinoma in approximately 10% of cases[9,10]. In particular, postmenopausal bleeding may be an early symptom of endometrial carcinoma.

Currently the most commonly used technologies for outpatient evaluation of the endometrium are biopsy, hysteroscopy, and Trans Vaginal Ultrasound (TVS). Endometrial biopsy by Dilatation and Curettage or office endometrial biopsy is considered the gold standard in AUB.

The present study is designed to study the histopathological results of the endometrial biopsy in women with abnormal perimenopausal and postmenopausal uterine bleeding.

2. Aims and Objectives

To study, the various histopathological patterns of endometrium, in patients with abnormal uterine bleeding, those are in perimenopausal and postmenopausal age group.

3. Materials and Methods

The present study "Endometrial evaluation by histopathology in abnormal uterine bleeding in perimenopausal and postmenopausal patients" was a prospective study, which was carried out in the Department of Obstetrics and Gynaecology, MVP's Dr. Vasantrao Pawar Medical College, Hospital and Research Centre, Nashik.

The period of study was from August 2011 to December 2013. 100 patients were selected for the study after satisfying the following inclusion and exclusion criteria.

3.1 Inclusion Criteria

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

3.2 Exclusion Criteria

1. Hormone therapy in last 6 months
2. Positive pregnancy test
3. Cases with cervical, uterine, or adnexal pathology on clinical examination or ultrasound.
4. Women with cervical cancer.
5. History/ evidence suggestive of active pelvic infection.

Written Informed consent was obtained from all participants. A structured proforma was used to collect the medical history and examination findings of the patients. They underwent detailed history taking including the pattern of bleeding, and general, systemic, and pelvic examination. They were subjected to routine laboratory investigations and pelvic ultrasound examination.

Endometrial biopsy was done irrespective of endometrial thickness. Endometrial biopsy was done in OPD without anaesthesia. Biopsy was performed using a manual vacuum aspiration syringe, and the material collected was sent for histopathological examination. Endometrium was also obtained from patients undergoing diagnostic or therapeutic dilatation and curettage.

Analysis of Histopathology report was done and results were obtained.

4. Results

There were total 100 cases of abnormal uterine bleeding in perimenopausal and postmenopausal patients. Out of these, 83 (83%) were perimenopausal patients and 17 (17%) were postmenopausal patients.

The clinical characteristics of the study population and age distribution were shown in Tables 1 and 2.

The maximum incidence of abnormal uterine bleeding was in multiparous patients (parity 1-3) of 85%, followed by grandmultiparous (parity>3) patients (11%) and least in nulliparous patients 4%.

Distribution of patients according to bleeding pattern is as shown in Table 3 and Figure 1.

Table 1. Age-wise distribution of patients

Age	Perimenopausal (% in group)	Postmenopausal (% in group)	Total (%)
40-45	60 (72%)	1 (6%)	61 (61%)
46-50	18 (22%)	4 (24%)	22 (22%)
51-55	4 (5%)	4 (24%)	8 (8%)
56-60	1 (1%)	5 (29%)	6 (6%)
61-65	0 (0%)	2 (12%)	2 (2%)
66-70	0 (0%)	1 (6%)	1 (1%)
Total	**83 (100%)**	**17 (100%)**	**100 (100%)**

Table 2. The clinical characteristics of the study population

	Perimenopausal		Postmenopausal		Total (perimenopausal + postmenopausal)	
	Range	Mean ±SD	Range	Mean ± SD	Range	Mean ± SD
Age (years)	40-56	44.012 ± 3.71	45-68	55.00 ± 6.10	40 - 68	45.880 ± 5.88
Menarche (years)	11-16	13.397 ± 1.27	11-16	13.470 ± 1.23	11 - 16	13.410 ± 1.26
Menopause (years)	-	-	43-55	48.058 ± 3.32	43-55	48.058 ± 3.32
BMI (kg/m^2)	18-35	23.720 ± 3.70	18-39	26.147 ± 5.51	18 - 39	24.133 ± 4.13
Haemoglobin (g/dl)	5.5 - 13.3	10.200 ± 1.65	8.6 - 13.2	11.764 ± 1.11	5.5 - 13.3	10.466 ± 1.67
ET (mm) on TVS	4 - 29	13.388 ± 4.36	3.0 - 18.0	11.147 ± 5.09	3 - 29	13.007 ± 4.55

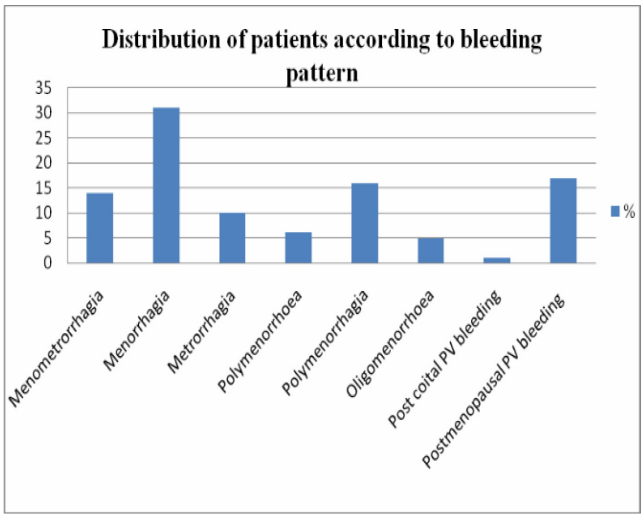

Figure 1. Distribution of patients according to bleeding pattern.

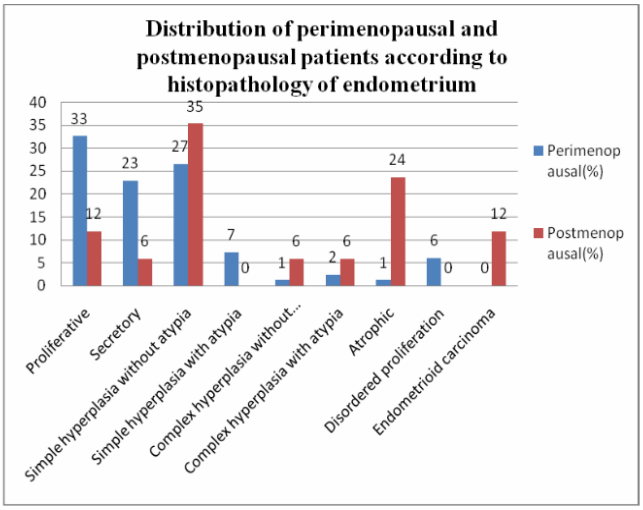

Figure 2. Distribution of patients according to histopathology of endometrium.

Table 3. Distribution of patients according to histopathology of endometrium

Histopathology	Perimenopausal (% in group)	Postmenopausal (% in group)	Total (%)
Proliferative	27 (33%)	2 (12%)	29 (29%)
Secretory	19 (23%)	1 (6%)	20 (20%)
Simple hyperplasia without atypia	22 (27%)	6 (35%)	28 (28%)
Simple hyperplasia with atypia	6 (7%)	0 (0%)	6 (6%)
Complex hyperplasia without atypia	1 (1%)	1 (6%)	2 (2%)
Complex hyperplasia with atypia	2 (2%)	1 (6%)	3 (3%)
Atrophic	1 (1%)	4 (24%)	5 (5%)
Disordered proliferation	5 (6%)	0 (0%)	5 (5%)
Endometrial carcinoma	0 (0%)	2 (12%)	2 (2%)
Total	**83 (100%)**	**17 (100%)**	**100 (100%)**

Distribution of patients according to histopathology of endometrium is as shown in Figure 2.

5. Discussion

Abnormal uterine bleeding at any stage in a woman's life is disruptive and worrisome. But postmenopausal bleeding is of special concern because it is the only common clinical indication of the presence of endometrial Carcinoma. Several different approaches have been proved to be clinically useful screening methods for early detection of endometrial abnormality in women with irregular uterine bleeding. These include dilatation and curettage (D&C), hysteroscopy, and micro-hysteroscopy.

With regards to age of the study population,

Archana Bhosle[1] studied 112 perimenopausal women with abnormal uterine bleeding, where 76% were in the age group of 41-45, 2.6% were in group 46-50 and 2.6% in group >51.

Cornitescu[3] studied 256 perimenopausal patients and reported 35.5% incidence in age 41-45 and 64.5% incidence in group 46-52.

Bharani et al. (2008)[12] says that in perimenopausal patients the mean age is 47.52 ± 1.88 (43-50) whereas in postmenopausal patients it is 55.254 ± 3.84 (52-65).

Indu Kaul et al. (2012)[11] studied postmenopausal patients and says that mean age is 54.06 ± 6.64 (41-70).

According to Kaul et al.[11], the mean age at menopause is 47.8 ± 2.82 (range 47-49), whereas according to our study it is 48.05 ± 3.32 years.

With regards to the pattern of bleeding, Bhosle (2010)[1] said that maximum incidence was of menorrhagia (53.3%), followed by 28.2%, 12.2% and 6.5% with polymenorrhagia, intermenstrual bleeding and metrorrhagia respectively. According to Cornitescu[3], maximum patients had menometrorrhagia (34%), while least incidence was of intermenstrual bleeding (9%).

With regards to the histopathology of endometrium in perimenopausal patients, Bharti[12] said that 4.3% had proliferative endometrium, 78.26% had simple hyperplasia without atypia and 13.04% had complex hyperplasia without atypia. According to Bhosle[1], 66.1% had proliferative endometrium, 16.1% had Secretory endometrium and 17.8% simple hyperplasia without atypia.

According to the study by Cornitescu[3], 8.6% had Secretory endometrium, 1.2% had simple hyperplasia without atypia, 1.6% had complex hyperplasia with atypia, 7% had atrophic endometrium and 1.9% had disordered proliferation.

Among postmenopausal patients, Bharti[12] said that 56% had simple hyperplasia without atypia, 8% had complex hyperplasia without atypia, 8% had complex hyperplasia with atypia, 16% had atrophic endometrium and 12% had carcinoma. According to the study by Kaul et al.[11], 18% had hyperplasias, 50% had atrophic endometrium, 10% had carcinomas, 8% had polyp, 8% had insufficient sample, 4% had endometritis and 10% had hormonal effect.

Endometrial carcinoma most often occurs in women in the sixth and seventh decades of life at an average age of 60 years. Seventy five percent cases occur in women older than 50 years of age and 90% of women with endometrial carcinoma have vaginal bleeding or discharge as their only presenting complaint. Less than 5% of women diagnosed with endometrial cancer are asymptomatic. The incidence of adenocarcinoma is 0.1% per year in post menopausal women but rises to 10% in presence of abnormal bleeding. In our study there were 2 cases of adenocarcinoma amongst 17 patients with post menopausal bleeding and none in perimenopausal group.

6. Conclusion

Study of endometrial histopathology in perimenopausal and postmenopausal women with abnormal uterine bleeding is helpful to diagnose hyperplasia and carcinoma of endometrium.

Endometrial biopsy has for many years been the methods of choice for the diagnosis of endometrial cancer in patients with peri and postmenopausal bleeding. Apart from it, it reveals various endometrial patterns ranging from proliferative, secretory, simple and complex hyperplasia with/without atypia, disordered proliferation and atrophic endometrium.

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