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FREQUENCY OF DIFFERENT ABNORMAL HISTOPATHOLOGIES IN PERIMENOPAUSAL FEMALES WITH ABNORMAL UTERINE BLEEDING

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ABSTRACT

Objectives: *To determine the frequency of different histopathologies in perimenopausal females with abnormal uterine bleeding.*

Materials and Methods: *This descriptive cross sectional Study was carried out at the in the department of obstetrics and Gynecology Lady reading hospital from 21st September 2022 to 21st March 2023. Informed consent was taken. Detailed history of patients presenting with complaints of Abnormal uterine bleeding was taken and systemic examination done. Preoperative investigations were done. Those patients meeting the inclusion criteria underwent dilatation and curettage (DNC) under general anesthesia. Endometrial biopsy sample was collected and sent for histopathological evaluation by pathology department of lady Reading Hospital.*

Results: *The most common clinical presentation was represented by irregular vaginal bleeding in 48.6% patients followed by heavy menstrual bleeding in 34% cases and intermenstrual bleeding in 16.9% cases.The predominant histopathological pattern was Secretory endometrium (29.5%) followed by disordered proliferative (19.7%), chronic endometritis (19.1%), endometrial polyp (14.8%), simple endometrial hyperplasia (7.7%), endometrial carcinoma (5.5%), atrophic endometrium (3.8%).*

Conclusion: *The intended study concludes that the most common histopathological pattern of endometrium in patients with AUB is secretory endometrium regardless of age, parity and ethnicity. Careful screening can detect cancer of endometrium in its early stage favoring excellent prognosis. These conditions can be managed medically thereby avoiding surgery and its associated risks.*

Key words: *Abnormal uterine bleeding, Histopathology, Dilatation and Curettage*

INTRODUCTION

Abnormal Uterine Bleeding refers to irregular bleeding from the uterus, characterized by abnormal volume, pattern, or timing, persisting for most of the past six months. While AUB may result from pelvic disorders, including cancer, most women experiencing menstrual issues do not have underlying abnormalities[1]. This is one of the most common menstrual problems and has remained a frequent cause of hysterectomies in developing countries[2]. Heavy menstrual bleeding stands as a prevalent cause for gynecological visits, occurring frequently in both primary and specialized healthcare settings. Approximately 1 in 20 women aged 30 to 49 consult their general practitioner annually due to menstrual issues, with menstrual disorders constituting 12% of all referrals to gynecology services[3]. The cause of AUB is established using the PALM - COEIN classification system that leads to accurate diagnosis and guide about treatment options[4]. Worldwide the impact of AUB in the reproductive years is significant, with

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the prevalence of approximately 3% to 30% among reproductive aged women[4]. In the research conducted in Turkey, 25% of women between the ages of 15 and 44 reported experiencing either extended or frequent menstrual cycles, or spotting, leading them to consult a doctor. Among them, 16% received a clinical diagnosis of Abnormal Uterine Bleeding (AUB). This condition was found to have a prevalence of 11% in the Philippines and 20% in China[5]. There is age specific association of AUB with increased incidence in perimenopausal age group[6]. Endometrial tissue can be obtained through several techniques like pipelle and vebra but uterine curettage or biopsy is a preferred sampling procedure[7]. AUB accounts for most the patients seen by gynecologists during clinic visits in their premenopausal and post-menopausal[8]. One study shows (29%) incidence of proliferative phase endometrium, endometrial hyperplasia in 59 cases (24.8%), chronic endometritis in 40 cases (16.8%), secretory phase endometrium in 40 cases (16.8%), atrophic endometrium in 30 cases (12.6%), and endometrial polyps in 10 cases (4.2%). Most cases of AUB are benign and can be treated in an office based setting[9]. However often patients present with a multitude of symptoms and their assessment requires training and expertise[10].

As uterine pathologies are more common in perimenopausal age group so this current study will assist in deciding whether endometrial sampling is necessary in all patients coming with abnormal uterine bleeding in this age group and which histopathology pattern is more common in this age group in our local population to create local evidence. This will create awareness among health personnel regarding different histopathology patterns for early diagnosis of different conditions and their appropriate timely management.The objective of this study was to determine the frequency of different histopathologies in perimenopausal females with abnormal uterine bleeding.

MATERIALS AND METHODS

This cross sectional Study was carried out at the in the department of obstetrics and Gynecology, Lady reading hospital from 21st September 2022 to 21st March 2023. After approval from hospital ethical and research committee a total of 183 patients were recruited through consecutive non probability sampling technique. The women aged 35 to 60 years and women who underwent dilatation and curettage for endometrial sampling with complaints of abnormal uterine bleeding were included in the study. Women excluded from study were those diagnosed with uterine fibroids, systemic diseases like liver, thyroid, diabetes, coagulopathies and any cervical or vaginal pathology such as ectropion, cervicitis, CIN, cervical polyps. Pregnant women and those taking drugs like oral contraceptive pills, warfarin, heparin and progesterone were also excluded from study. Detailed history of Patients was taken and systemic examination done. Preoperative investigations were done. After workup, informed consent was taken. Those patients meeting the inclusion criteria underwent dilatation and curettage (DNC) under general anesthesia. Endometrial biopsy sample was collected and sent for histopathological evaluation to Histopathology department of lady reading hospital.

RESULT

The study was conducted on 183 patients in the department of Obstetrics and Gynecology; Gynae A unit, Lady reading hospital Peshawar. As per descriptive statistics, the mean and SD was recorded as 45.18 and 2.934 Maximum number of patients were 45 years old .Maximum number of cases were Grand multipara (Table 1). The most common clinical presentation was represented by irregular vaginal bleeding in 48.6% patients followed by heavy menstrual bleeding in 34% cases and intermenstrual bleeding in 16.9% cases (Table 2). As shown in (Table 3) secretory endometrium is the predominant pattern 29.5% followed by disordered proliferative in 19.7% as the second most common pattern. High prevalence of irregular vaginal bleeding with highest prevalence

Table 1: Frequencies and percentages for parity.

Parity	Frequency	Percentages
multiparous	30	16.4
Grand multiparous	134	73.2
Grand Grand Multiparous	19	10.3
Total	**183**	**100.0**

Table 2: Frequencies and percentages for Bleeding Patterns.

Bleeding Pattern	Frequency	Percentages
Heavy Menstrual Bleeding	63	34.4
Irregular Vaginal Bleeding	89	48.6
Intermenstrual Bleeding	31	16.9
Total	**183**	**100.0**

between 42 to 46 years (Table 4). Different patterns of histopathologies with respect to age are illustrated in (Table 5)

DISCUSSION

Endometrial evaluation has its own importance as it helps diagnose malignant or pre-malignant conditions and examines the hormonal effects on the endometrial tissue. Evaluating the histopathology of the endometrium becomes important for a woman who doesn't respond to medical treatment for three months. Endometrial biopsy is taken to exclude endometrial cancer or atypical hyperplasia[11]. Indications for taking biopsy includes ongoing intermenstrual bleeding and, in women aged 45 years and older, ineffective treatment or failure of treatment. Among patients with Abnormal Uterine Bleeding, some may also have endometrial hyperplasia or cancer, which is the most prevalent gynecological malignancy in the Western world. Despite typically increasing postmenopause, it can occur at any age, with 7% of cases occurring in individuals under 50. This percentage is on the rise due to the growing prevalence of obesity and diabetes[12].

Dilatation and curettage serves as a valuable and economical approach to identifying intrauterine pathologies, capturing the majority of lesions without significant omissions[13]. Examining the histopathology of the curettage specimen is vital for pinpointing the underlying cause of abnormal uterine bleeding (AUB). This is particularly crucial in the perimenopausal age bracket due to the heightened occurrence of intrauterine lesions within this demographic[14,15]. Although endometrial biopsy has become the primary diagnostic method for abnormal uterine bleeding (AUB), dilatation and curettage are still necessary in certain situations. If a biopsy cannot be conducted, or if the sample obtained is inadequate, especially in cases where there is a high risk of endometrial cancer, dilatation and curettage remains essential[16]. This demonstrate strong sensitivity, specificity, as well as positive and negative predictive values in detecting both premalignant and malignant conditions. Specifically, its specificity and positive predictive rate for diagnosing simple hyperplasia are relatively high, although the sensitivity and negative predictive rate are low. Conversely, the specificity and positive predictive rate for identifying atypical hyperplasia are low[17]. The histopathological assessment of endometrial curettings revealed diverse patterns, encompassing both physiological and pathological lesions of the endometrium. The most frequent histopathological

Table 3: Frequencies and percentages for Histopathologies.

Histopathologies	Frequency	Percentages
Secretory Pattern	54	29.5
Disordered Proliferative Pattern	36	19.7
Simple Endometrial Hyperplasia	14	7.7
Endometrial Polyp	27	14.8
Chronic Endometritis	35	19.1
Atrophic Pattern	7	3.8
Endometrial Carcinoma	10	5.5
Total	**183**	**100.0**

Table 4: Stratification of Bleeding pattern with respect to age.

Age of the patient	Bleeding Pattern			Total	P value
	Heavy Menstrual Bleeding	Irregular Vaginal Bleeding	Intermenstrual Bleeding		
42-46	55 (30.05%)	55 (30.05%)	55 (30.05%)	139 (75.96%)	0.01
47-52	8 (4.37%)	8 (4.37%)	8 (4.37%)	44 (24.04%)	
Total	**63 (34.43%)**	**63 (34.43%)**	**63 (34.43%)**	**183 (100%)**	

Table 5: Stratification of Histopathology with respect to age.

Age of the patient	Abnormal Histopathology							
	Secretory Pattern	Disordered Proliferative Pattern	Simple Endometrial Hyperplasia	Endometrial Polyp	Chronic Endometritis	Atrophic Pattern	Endometrial Carcinoma	P value
42-46	49 (26.78%)	28 (15.30%)	10 (5.46%)	19 (10.38%)	27 (14.75%)	3 (1.64%)	3 (1.64%)	0.05
47-52	5 (2.73%)	8 (4.37%)	4 (2.19%)	8 (4.37%)	8 (4.37%)	4 (2.19%)	7 (3.83%)	

diagnosis was secretory endometrium, accounting for 29.5%, followed by a disordered proliferative pattern at 19.7%.Secretroy endometrium was most upto 46 years age while above 46 years chronic endometritis, endometrial poly and disordered proliferative pattern was common. This was in concordance with a study by Jairajpuri ZS et al where 28.9% of secretory endometrium followed by proliferative pattern in 24.9%[13] was observed. Another study showing similar results 24.9% cases of secretory endometrium reported as the commonest diagnosis followed by 21.7% cases of proliferative endometrium[18]. Endometrial samples of 183 patients with AUB in perimenopausal age group were assessed. Analysis of clinical details revealed irregular vaginal bleeding as the most common complaint, accounting for 89 (48%) patients. Trends similar to our study have been seen in a study reported by Mughal (40.83%)[19]. Our study showed 48.6%(89/183) participants presenting with irregular vaginal bleeding, 34.4%(63/183) participants with heavy menstrual bleeding; second most common complaint and 16.9%(31/183) with intermenstrual bleeding. In a study by A Masood and E Waris the predominant histopathological pattern was secretory endometrium in 31% of cases, consistent with our investigation, which reported a prevalence of 29.5%[20]. Comparable research conducted on women experiencing abnormal uterine bleeding revealed prevalence of secretory endometrium at 16.1% and 23%[21]. Anovulatory cycles are particularly prevalent during the perimenopausal phase, resulting in irregular and unpredictable bleeding patterns. Numerous studies conducted in the subcontinent have reported analogous results. A study of perimenopausal women with atypical uterine bleeding by Bhosle et al[22] from Mumbai showed simple hyperplasia without atypia in 17.8%, whereas our study showed 7.7%.n a study conducted by Khare et al., it was similarly found that simple endometrial hyperplasia without atypia and proliferative endometrium were the predominant histological findings among perimenopausal women, constituting 24 out of 47 cases, which accounts for 51% of the cases. In 9.1% cases endometritis was a significant diagnosis. Chronic endometritis is a cause of AUB in 6.4% and 20.7% of cases[23]. Endometrial polyps were seen in 14.8% cases which is close to another study showing 10.4% published by Abid et al, conducted in Pakistan[2]. Disordered proliferative endometrium is commonly seen in perimenopausal females. This pattern was seen in 12.2% of cases in a study by Sajitha et al[24]. Another study by Saadia et al reported a similar incidence of 10%[25]. Current study showed higher value of 19.7% and second most common pattern. This study represents AUB pattern too in our loacality. In a study conducted by jetley et al on endometrial pathology in middle aged women with AUB showed disordered proliferative endometrium in 6.8% whereas our study showed a slightly higher value of 19.7%[26]. The most common pattern of AUB prevalent in our community is secretory pattern followed by disordered proliferative. Both can be managed conservatively. A small percentage of endometrial carcinoma is seen. The management of these conditions do not require surgery like total abdominal hysterectomy. This will reduce financial burden on patients family plus will also reduce hospital finances. Surgery, anesthesia related complications and long-term comorbidities can be prevented as well.

CONCLUSION

The intended study concludes that the most common histopathological pattern of endometrium in patients with AUB is secretory endometrium regardless of age, parity and ethnicity. Careful screening can detect cancer of endometrium in its early stage favoring excellent prognosis. These conditions can be managed medically thereby avoiding surgery and its associated risks.

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