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ORIGINAL ARTICLE

Frequency of Common Histopathological Findings among Patients Having Endometrial Thickness ≥5mm Presenting with Abnormal Uterine Bleeding

SADIA SHARIF[1], AYESHA SAJJAD[2], AMNA KAZI[3], AYESHA MASOOD[4,] NAZISH JAVAID[5]
[1]Assocaite Professor, Department of Pathology, Amna Inayat Medical College, Lahore
[2]Assistant Professor, Department of Microbiology, Amna Inayat Medical College, Lahore
[3]Assitant Professor, Department of Obstetrics & Gynaecology, Shaikh Zayed Hospital, Lahore
[4]Assistant Professor, Department of Microbiology, University College of Medicine & Dentistry, The University of Lahore
[5]Women Medical Officer, Jinnah Satellite Filter Clinic C2, Green Town, Township, Lahore
Correspondence to Dr. Ayesha Sajjad, E-mail: drayesha69@yahoo.com, Cell: 0331-4140621

ABSTRACT

Aim: To determine the frequency of common histopathological findings among patients having endometrial thickness >5mm and having atypical bleeding of uterus.
Study design: Descriptive and cross sectional study
Study settings: Department of Obstetrics & Gynaecology, Kishwer Fazal Teaching Hospital, Sheikhupura from 1st October 2020 to 31st March 2021.
Methodology: One hundred and twenty patients were enrolled. Patients were aged between 45 to 60 years. Patient's detailed demographics including age, parity, socioeconomic grade and body mass index were recorded post written informed consentreceival. Patients having endometrial thickness >5mm with abnormal uterine bleeding were included in this study.All the patients were undergone for transvaginal ultrasonography (TVS). Outcomes were histopathological findings observed.
Results: The patients mean age was found to be 51.16±4.88 years with mean body mass index 27.24±4.63 kg/m^2. Thirty five (29.2%) patients had parity I and 85 (70.8%) patients had parity II. Forty two (35%) patients had high socioeconomic status and 78(65%) were from low socio economic status. Majority of the patients 80(66.7%) were from rural areas. Secretory and proliferative were the most common histopathological findings found in (45.83% and 26.7%) patients. Frequency of endometrial carcinoma was found among 97(80.8%) cases.
Conclusion: The most common histopathological findings were secretory and proliferative and frequency of endometrial carcinoma was too high. Endometrial anomalies can be excluded by transvaginal ultrasonography and is strongly useful in the evaluation of abnormal bleeding from the uterine.
Keywords: Endometrial, Transvaginal ultrasonography, Uterine bleeding

INTRODUCTION

Abnormal uterine bleeding (AUB) is categorisedby uterine bleeding pattern that differs from a typical menstrual cycle in terms of frequency, duration, and amount. One of the most prevalent problems seen in gynecological out-patient clinics is abnormal uterine bleeding. Federation of International Gynecological & Obstetrics (FIGO's) categorization system identifies endometrial polyps, adenomyosis, leiomyoma, malignancy and hyperplasia, coagulopathy, ovulatory dysfunction and endometrial disease as causes of AUB in women during their reproductive years, as well as iatrogenic causes and unclassified reasons polyp, leiomyoma, malignancy , adenomyosis, hyperplasia endometrial , coagulopathy, iatrogenic, idiopathic as well as ovulatory dysfunction.[1,2] A malignancy is the most serious cause. The other risk factors for endometrium carcinoma includes late menopause, nulliparous women, high BMI, chronic unobstructed estrogen levels, lynch syndrome, polycystic ovaries and or diabetes mellitus[3,4].

Endometriosis is most common in women after menopause, however up to 14% of those affected are premenopausal, with 4% of those affected under the age of 40. In order to get endometrial tissue, several procedures are utilized, including endometrial sampling, hysteroscopydilatation direct biopsyas well as curettage/ fractional curettage.[5] When it comes to diagnosing endometrial pathology, both endometrial sampling and the dilatation in addition to curettage (D&C) have revealed approximately comparable accuracy[6,7]. After menopause, endometrial sampling is advised, although there is no strong proof that it should be conducted in premenopausal women[1,8].

Sampling from endometrium is suggested in those women who are over 35 with AUB, according to certain research.[5] According to the SOGC those women who are either over 40 years of age or those whose bleeding has not been effected by given treatment or are younger and under risk of endometrium carcinoma are suggested for this operation[8] Endometrial sampling is recommended by the American College of Obstetricians and Gynecologists (ACOG) for women greater than 45 years of age or are younger in age with certain factors which enhances their risk such polycystic ovaries, non-respondents to medical treatment, obese or having chronic bleeding disorders[1].

It is safe, painless, and may be performed in an outpatient clinic, although the instrument kit is expensive (300 Thai baht or 10 USD/piece). Present study was conducted aimed to compare endometrial thickness on TVS to histopathology in women with irregular uterine bleeding.

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MATERIALS AND METHODS

This descriptive and cross-sectional study was done at Department of Obstetrics & Gynaecology, Kishwer Fazal Teaching Hospital, Sheikhupura from 1st October 2020 to 31st March 2021 after permission from Ethical Committee and comprised of 120 females. After attaining an informed written consent from the patients/attendants the patient's detailed complete demographics age, parity, socio economic grade and body mass index were recorded. Patients were aged between 45 to 60 years. Patients having endometrial thickness >5 mm with abnormal uterine bleeding were included. Patients have chronic liver disease, genital tract trauma and history of taking anticoagulants were excluded. All the patients were undergone for transvaginal ultrasonography (TVS). Histopathological findings were observed. Complete data analysis was done through using statistical tool of SPSS version 24.

RESULTS

Mean age of the patients was 51.16±4.88 years with mean body mass index 27.24±4.63 kg/m^2. Thirty five (29.2%) patients had parity I and 85(70.8%) patients had parity II. Forty two (35%) patients had high socio-economic status and 78(65%) were from low socio economic status. Majority of the patients 80(66.7%) were from rural areas (Table 1).

Secretory and proliferative were the most common histopathological findings found in (45.83% and 26.7%) patients, atrophic was among 15(12.5%) cases, polyp in 8(6.7%), simple hyperplasia in 7(5.83%) and complex hyperplasia with atypia in 3(2.5%) [Table 2]. Frequency of endometrial carcinoma was found among 97(80.8%) cases and was absent among 23(19.2%) cases (Table 3).

Table 1: Baseline details demographics of enrolled cases

Variable	**No.**	**%**
Mean age (years)	51.16±4.88	
Mean BMI (kg/m^2)	27.24±4.63	
Parity		
I	35	29.2
II	85	70.8
Socio economic status		
High	42	35.0
Low	78	65.0
Residency		
Rural	80	66.7
Urban	40	33.3

Table 2: Frequency of histopathological findings

Histopathological findings	**No.**	**%**
Secretory	55	45.83
Proliferative	32	26.7
Atrophic	15	12.5
Polyp	8	6.7
Simple hyperplasia	7	5.83
Complex hyperplasia with atypia	3	2.5

Table 3: Prevalence of endometrial carcinoma among cases

Endometrial carcinoma	**No.**	**%**
Yes	97	80.8
No	23	19.2

DISCUSSION

Endometrial malignancy is one of the most commonly presented gynaecological malignancy seen in women.[9] Uterine cancer makes up just 1.9% of all cancers, yet it is on the rise, as is the average life expectancy[10]. There was a 2.5% prevalence of a benign endometrial disease (endometrial polyp) when bleeding was present[11,12]. As far as diagnosing endometrial problems is concerned, curettage appears to have been the gold standard for a long time[13].

Patients mean age was recorded as 49.16±9.88 years with mean BMI 27.24±7.63kg/m^2. Thirty five (29.2%) patients had parity I and 85(70.8%) patients had parity II. Our findings were comparable to the previous studies[14,15]. Forty two (35%) patients had high socioeconomic status and 78(65%) were from low socio economic status. Majority of the patients 80(66.7%) were from rural areas[16]. In our study secretory (45.83%) and proliferative (26.7%) were the most common histopathological findings found, atrophic was among 15(12.5%) cases, polyp in 8(6.7%), simple hyperplasia in 7(5.83%) and complex hyperplasia with atypia in 3(2.5%). Proliferative endometrium, secretory endometrium, hyperplasia/atrophy, and cancer of the endometrium were detected by Sur et al[17].

The endometrial cancer and hyperplasia rates were 8% and 17% respectively, in a retrospective examination of 123 asymptomatic women with a 10 mm or greater endometrial thickness[18,19]. Ciattoet al[20] examined the 2025 females by TVS and 117 exhibited abnormal endometrial thickness. Endometrial biopsy specimens from 66 of these women revealed three (4.5%) incidences of cancer. Two studies described by Schmidt and his colleagues and Lev-Sagie and his colleagues[22] showed that there was no connection between endometrial polyps and cancer. Normal or benign endometrium was found in the pathological reports of this investigation. This information could be utilized forproviding advice to those pre-menopausal women who has lower chance and symptoms of AUB. For women whose encounters failure in their medical treatment or those who suffersextended bleeding from uterus, endometrial sampling is a viable option.

In the current study, frequency of the endometrial carcinoma was found among 97(80.8%) cases and was absent among 23(19.2%) cases. Previous research presented same results to our study[23]. A non-invasive diagnostic tool, transvaginal ultrasonography (TVUS) provides crucial information on the endometrium in women with abnormal uterine bleeding. Histopathologically, secretory, proliferative, atrophic, polyp, and simple hyperplasia were the most common.

In a recent report, 438 females were examined with a 10% prevalence of polypoidal melanoma in symptomatic females compared to 0.9% in symptomless females.[24] 78.5 percent of the 475 cases in Antunes et al[25] study had endometrial polyps, whereas 2.7% had been malignant polyps. It may be possible to prevent postmenopausal haemorrhage in women with endometrial thickness <5mm. For women who are menstruation, no precise cutoff value could be determined. Endometrial cancer, on the other hand, was shown to be more likely in those women having inter-menstrual bleeding as compared to those having

excessive menstrual flow, according to Pennant and colleagues[26].

CONCLUSION

Transvaginal ultrasound is a primary protocol required in post-menopausedwomen having bleeding from uterus. This should further be proceeded by endometrial complete examination in the case of irregular endometrium its thickness is around ≥5 mm. The suggested cut-off must be as 10 mm in women who are asymptomatic, the most common histopathological findings were secretory and proliferative and frequency of endometrial carcinoma was too high. The endometrial anomalies can be excluded by transvaginal ultrasonography and is strongly useful in the assessment of abnormal uterine bleeding.

REFERENCES

1. Committee on Practice Bulletins - Gynecology. Practice bulletin No. 128: diagnosis of abnormal uterine bleeding in reproductive-aged women. Obstet Gynecol 2012;120:197-206.
2. 2. Munro MG, Critchley HOD, Broder MS, Fraser IS, FIGO Working Group on Menstrual Disorders. FIGO classification system (PALM-COEIN) for causes of abnormal uterine bleeding in nongravid women of reproductive age. Int J Gynaecol Obstet 2011;113(1):3-13.
3. Farquhar CM, Lethaby A, Sowter M, Verry J, Baranyai J. An evaluation of risk factors for endometrial hyperplasia in premenopausal women with abnormal menstrual bleeding. Am J Obstet Gynecol 1999;181(3): 525-9.
4. Iram S, Musonda P, Ewies AAA. Premenopausal bleeding: when should the endometrium be investigated? A retrospective non-comparative study of 3006 women. Eur J Obstet Gynecol Reprod Biol 2010;148:86-9.
5. Duska LR, Garrett A, Rueda BR, et al. Endometrial cancer in women 40 years old or younger. Gynecol Oncol 2001;83:388-93.
6. Demirkiran F, Yavuz E, Erenel H, Bese T, Arvas M, Sanioglu C, et al. Which is the best technique for endometrial sampling? Aspiration (pipelle) versus dilatation and curettage (D&C). Arch Gynecol Obstet 2012;286(5):1277-82.
7. Huang GS, Gebb JS, Einstein MH, Shahabi S, Novetsky AP, Goldberg GL. Accuracy of preoperative endometrial sampling for the detection of high-grade endometrial tumors. Am J Obstet Gynecol 2007; 196(3):243.e1–e5.
8. Singh S, Best C, Dunn S, Leyland N, Wolfman WL, Clinical Practice Gynaecology Committee. Abnormal uterine bleeding in pre-menopausal women. J Obstet Gynaecol Can 2013;35(5): 473-5.
9. National Cancer Institute. Cancer stat fact sheet Sorpus and uterus. NOS. Bethesda. Md: National Cancer Institute 2010
10. Kong TW, Lee KM, Cheong JY, Kim WY, Chang SJ, et al. Comparison of laparoscopic versus conventional open surgical staging procedure for endometrial cancer. J Gynecol Oncol 2010;21:106-11.
11. Clark TJ, Khan KS, Gupta JK. Review: The diagnosis of intrauterine pathology in post-menopausal women: an evidence based approach. Rev Gynaecol Prac 2002;2:109-16.
12. Bakour SH, Khan KS, Gupta JK. The risk of pre-malignant and malignant pathology in endometrial polyps. Acta Obstet Gynecol Scand 2000;79:317-20
13. Grimes DA. Diagnostic dilatation and curettage: a re-appraisal. Am J Obstet Gynecol 1982;142:1-6.
14. Bano K, Khan S, Qazi OA. Frequency of common histopathological findings among patients having endometrial thickness ≥5mm presenting with abnormal uterine bleeding. J Soc Obstet Gynaecol Pak 2020;Vol 10(1):61-4
15. Sattanakho P, Kleebkaow P, Sangkomkumhang U, Booranabunyat S, Buppasiri P. Rate of significant endometrial pathology in women at low risk for endometrial hyperplasia or cancer presenting with abnormal uterine bleeding. Pragmat Obs Res 2020;11:13-8.
16. Kucur, S. K. Contribution of spiral artery blood flow changes assessed by transvaginal color Doppler sonography for predicting endometrial pathologies. Dicle Med J 2013; 40: 345-9.
17. Vuopala S. Diagnostic accuracy and clinical applicability of cytological and histological methods for investigating endometrial carcinoma. Acta Obstet Gyneocl Scand Suppl1977; 70:1-72.
18. Sur D, Chakravorty R. Correlation of endometrial thickness and histopathology in women with abnormal uterine bleeding. Reprod Syst Sex Disord 2016,5:1-3.
19. Gerber B, Krause A, Mueller H, Reimer T, Kuelz T. Ultrasonographic detection of asymptomatic endometrial cancer in postmenopausal patients offers noprognostic advantage over symptomatic disease discovered by uterine bleeding. Eur J Cancer 2001;37:64-71.
20. Ciatto S, Cecchini S, Bonardi R, Grazzini G, Mazotta A. A feasibility study of screening for endometrial carcinoma in postmenopausal women by ultrasonography. Tumori 1995;81: 334-7.
21. Schmidt T, Breidenbach M, Nawroth F, Mallmann P, Beyer IM, Fleisch MC, et al. Hysteroscopy for asymptomatic postmenopausal women with sonographically thickened endometrium. Maturitas 2009; 62:176-8.
22. Lev-Sagie A, Hamani Y, Imbar T, Hurwitz A, Lavy Y. The significance of intrauterine lesions detected by ultrasound in asymptomatic postmenopausal patients. BJOG 2005; 112: 379-81.
23. Batool S, Manzur S, Raza S. Accuracy of Dopler ultrasound in diagnosis of endometrial carcinoma. 2013; 63(1):
24. Wethington SL, Herzog TJ, Burke WM, Sun X, Lerner JP, Lewin SN, et al. Risk and predictors of malignancy in women with endometrial polyps. Ann Surg Oncol 2011;18:3819-23.
25. Antunes A Jr, Costa-Paiva L, Arthuso M, Costa JV, Pinto-Neto AM. Endometrial polyps in pre-and postmenopausal women: factors associated with malignancy. Maturitas 2007;57: 415-21.
26. Pennant ME, Mehta R, Moody P, Hackett G, Prentice A, Sharp SJ, et al. Premenopausal abnormal uterine bleeding and risk of endometrial cancer. Int J Obstet Gynaecol 2017;124(3):404-11.