ORIGINAL ARTICLE

Clinico-Pathological Correlation of Abnormal Uterine Bleeding in Peri-Menopausal Women

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Abstract

Background: *Abnormal uterine bleeding is a common presenting symptom in clinical practice. It affects as many as 20% of otherwise healthy, perimenopausal women over the age of 35 and causes approximately 5% of women aged 30 to 49 years to seek medical care each year.* ***Aims and Objectives:*** *To know the causes of abnormal uterine bleeding in perimenopausal women (39- 51 years of age) and to study the benign pelvic disorders, malignant tumors of the reproductive tract, infections, and functioning ovarian tumors.* ***Methods:*** *This prospective study consisted of 254 perimenopausal women who were admitted in the gynecology department of tertiary care hospital during the period from May 2015 to May 2017 with the chief complaint of irregularity in menstrual cycle.* ***Results:*** *The commonest presenting symptom is menorrhagia (53.93% cases) followed by dysmenorrhea (17.32% cases). The commonest organ involved in abnormal bleeding is uterus in 85.43% patients followed by cervix 9.05%, ovary 1.57% and vagina 0.39%. Combined involvement of two or more organs seen in 3.54% cases. The commonest pattern of endometrium in dysfunctional uterine bleeding is proliferative type (28.92% of cases).* ***Conclusion:*** *Histopathological examination not only confirmed the preoperative diagnosis but also helped in diagnosing the cause in clinically unsuspected lesion like adenomyosis which was reported in 13.38% cases and was not diagnosed clinically in the present study. In cases preoperatively considered as DUB, histopathological examination diagnosed lesions like adenomyosis in 33.34% and leiomyoma in 32.25% thus establishing the cause of abnormal uterine bleeding.*

Keywords*: Abnormal uterine bleeding, Pri-menopausal women, Menorrhagia*

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Introduction

Abnormal uterine bleeding is a common presenting symptom in clinical practice. It affects as many as 20% of otherwise healthy, perimenopausal women over the age of 35and causes approximately 5% of women aged 30 to 49 years to seek medical care each year.[1] The causes of abnormal uterine bleeding include gynecological pathology (30%), endocrine disorder (5%), hematological disorder (5%), and in majority of cases (60%) there is no organic disease and the bleeding is termed dysfunctional.[2] In the current study, all gynecological pathologies are studied for their incidences and clinical presentations. Endometrial cancer is predominantly a disease of postmenopausal women; however 5% of patients present with irregular menses before menopause. This together with endometrial hyperplasia are the two most important conditions that need to be excluded in women >40 years old with abnormal uterine bleeding.[2] Cervical cancer is the most common cancer among women in developing countries. India bears about one-fifth of the burden for cervical cancer. There are approximately 130,000 new cases of cervical cancer in India per year.[3] The mean age for cervical cancer is 52.2 years. However, the distribution of cases is bimodal, with a peak of 35 to 39 years and 60-64 years of age.[4] Vaginal bleeding is the most common symptom occurring in patients with cancer of the cervix. Most often, this is post-coital bleeding, but it may occur as irregular or

postmenopausal bleeding.[5] The patients provide a precious diagnostic opportunity to the pathologist. Hence, in a patient with perimenopausal bleeding, a comprehensive and determined attempt should be made to rule out or establish the presence of malignancy. The most reliable methods of evaluation are necessary to achieve it.

Aims

1. To study benign pelvic disorders, malignant tumors of the reproductive tract, infections and functioning ovarian tumors.
2. Clinicopathological correlation of abnormal uterine bleeding.
3. To study the association of adenomyosis with its risk factors.

Materials and Methods

This prospective study consisted of 254 perimenopausal women who were admitted to the gynecology department of a tertiary care hospital during the period from May 2015 to May 2017 with the chief complaint of irregularity in the menstrual cycle. Aims and objectives: To know the causes of abnormal uterine bleeding in perimenopausal women (39-51 years of age).

All the patients who were included in the study underwent a detailed clinical workup which consisted of:

- A proper clinical history which included age, nature of menstrual irregularity, any exogenous hormonal therapy, discharge per vaginum and its nature, obstetric history and other co-existent systemic diseases.
- A thorough clinical examination including general examination, per abdominal examination, per speculum and per vaginal examination.
- Other investigations like USG, thyroid hormone levels were carried out wherever it was necessary.

These patients underwent various diagnostic and therapeutic measures which include dilatation and curettage, endometrial biopsy, polypectomy, myomectomy, hysterectomy, and panhysterectomy. The specimen received was fixed in 10% formalin for 12-18 hours. Standard sections were submitted and processed in stockinette; paraffin blocks were prepared. Sections 4-6 microns in thickness were cut on a microtome and stained by Hematoxylin and Eosin. All sections were meticulously studied and findings systematically recorded. Whenever hyperplasia or carcinoma was documented an earnest attempt was made to classify them by the WHO nomenclature and the findings were summarized in tabular form.

Results

The most common symptom was menorrhagia observed in 53.93% of patients followed by dysmenorrhea, polymenorrhea, and metrorrhagia.

Table 1: Distribution of symptoms in cases

Symptoms	No. of cases (n=240)	Percentage (%)
Menorrhagia	137	53.93
Polymenorrhea	34	13.38
Amenorrhea followed by heavy bleeding	27	10.62
Metrorrhagia	32	12.59
Menometrorrhagia	21	08.26
Spotting PV	12	04.72
dysmenorrhea	44	17.32
*Combined symptoms	49	19.29

*Patients having two or more of the above-mentioned symptoms at the time of presentation.

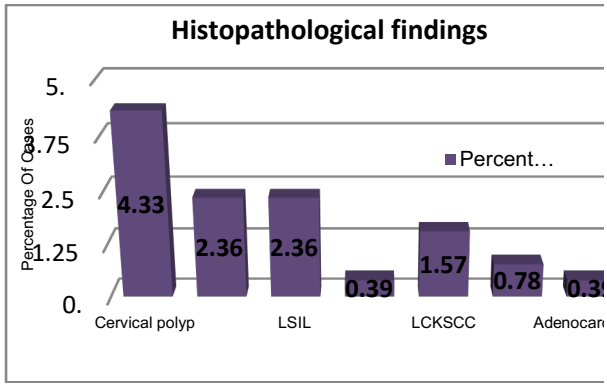
In the present study, the most common pattern noted was secretory endometrium in 22.22% cases. In the present study proliferative endometrium was reported in 15.87% of cases and disordered proliferative endometrium in 9.52% of cases. In the present study hyperplastic endometrium is reported in 14.27% of cases. Pill endometrium was reported in 3.96% of cases. The incidence is higher compared to 0.79% as reported in a study by Muhammad et al; [7].

Table 2: Endometrial patterns in cases of DUB

Patterns of endometrium	No. of cases (n=120)	Percentage (%)
Proliferative	35	28.92
Secretory	28	23.14
Disordered proliferative endometrium	15	12.50
Irregular shedding	05	04.16
Stromal and glandular breakdown	01	0.83
Luteal phase defect	01	0.83
Simple hyperplasia	21	17.50
Complex hyperplasia	01	0.83
Complex hyperplasia with atypia	03	02.50
Pill endometrium	06	05.00
Endometritis	04	03.33

In the present study, endometritis was reported in 2.37% of cases and 2.74% cases of cervical malignancies were reported.

Chart 1: Histopathological findings in the cervix



In the present study, the most common indication for hysterectomy is leiomyoma accounting for a total of 74 out of 128 cases (57.81 %) followed by DUB, 42 out of 128 cases (32.81 %).

Discussion

This study focuses on perimenopausal women coming to a tertiary care hospital, with a complaint of abnormal uterine bleeding. The study comprises of 254 cases of perimenopausal patients who underwent dilatation and curettage, endometrial biopsy or total hysterectomy with or without salpingo-oophorectomy from May 2015 to May 2017. The commonest presenting symptom in the study population was menorrhagia followed by dysmenorrhea. Out of 254 patients 137 patients i.e. 53.93% came with the complaint of menorrhagia. This is similar to the study of Bhosale et al; [5] reports 53.30%. This result is also comparable to the studies done by Maheshwari et al; [6] 43% and Muhammad et al;[7] 56.8%. The next common abnormal bleeding pattern was polymenorrhea in 13.38% of cases. Bhosale et al; [5], Maheshwari et al; [6] and Patel et al; [8] also reported polymenorrhea as a second commonest symptom in 12.20%, 27% and 36.70% of cases respectively. Muhammad et al; [7] has reported metrorrhagia as a second commonest symptom in 32% of cases in their study.

In the present study, the most common pattern noted was secretory endometrium in 22.22% cases. However, Bhosale et al; [5] reported proliferative as the commonest pattern while Milosevic et al; [9] and Muhammad et al; [7] reports hyperplasia as the commonest finding. Muhammad et al; [7] reported secretory phase in 30.15% cases. Bhosale et al; [5] and Milosevic et al; [9] reported secretory phase in 16.1% of cases each. In the present study proliferative endometrium was reported in 15.87% of cases and disordered proliferative endometrium in 9.52% of cases. Thus, the proliferative type of endometrium is seen in 25.39% of cases. In the study by Muhammad et al; [7] the incidence was 23.01%. Bhosale et al; [5] reported 66.1% cases of the proliferative endometrium, while Milosevic et al reported 10.70% cases of same. In the present study hyperplastic endometrium is reported in 14.27% of cases which is comparable with the study done in perimenopausal women by Bhosale et al; [5] who reported 17.80% cases of hyperplasia. However, Milosevic et al; [9] and Muhammad et al; [7] reported hyperplasia as their commonest finding comprising 23.4% and 32.53% of cases

respectively. In a study by Takreem et al; [10] 15% of premenopausal women showed endometrial hyperplasia which is agreement with present study.

Table 3: Comparative study of histopathological findings in hysterectomy specimens

	Present study 2010	**Gupta et al 2010 [12]**	**Bhosale et al 2010 [5]**	**Samaila et al 2009 [13]**	**Shakira P et al 2008 [14]**	**Layla A 2006 [15]**	**Tariq et al 2005 [16]**	**Shergill SK et al 2002 [17]**
Leiomyoma	60.15	35	55	68.8	36.11	34	48	34
Adenomyosis	26.56	24.20	29.4	4.10	23.40	18.4	29	15
Endometrial polyp	3.12	4.20	-	-	1.8	13.4	3	3
Gynecological malignancy	3.81	2.20	-	13.88	4.25	21	-	-
Endometrial pattern (DUB)	29.57	27.80	16.47	-	23.40	6.7	12	8
Combined pathology	27.34	-	-	-	-	32	10	-

Table 4: Comparison of types of hyperplasia of the endometrium

Types of hyperplasia	**Present study 2010 %**	**Takreem et al 2009 % [10]**	**Muhammad et al 2005 % [7]**	**Garuti et al 2001 % [18]**
Simple hyperplasia	11.90	10	16.67	11.15
Complex hyperplasia	0.79	3	13.49	02.26
Atypical hyperplasia	01.58	2	2.38	1.11

In hyperplasia, current study reported simple hyperplasia in 11.90% cases, complex hyperplasia in 0.79% cases and atypical hyperplasia in 1.58% cases. Muhammad et al[7] reported 16.67% simple hyperplasia, 13.49% complex hyperplasia and atypical hyperplasia in 2.38% cases. Takreem et al; [10] found 10% of cases with simple hyperplasia, 3% cases with complex hyperplasia and 2% atypical hyperplasia. Muhammad et al; [7] reported irregular shedding in 0.79% of cases Pill endometrium was reported in 3.96% of cases. The incidence is higher compared to 0.79% as reported in the study by Muhammad et al; [7] In the present study endometritis was reported in 2.37% cases and is comparable to the study by Milosevic et al; [9] which reported 3.70% of cases. The present study reported benign endometrial polyps in 7.14% of cases which is comparable to the study by A. Panda et al; [11] which reported endometrial polyps in 6.6% of patients. Muhammad et al; [7] reported a relatively lower percentage of cases i.e. 0.79 %.The present study reported 2.75% cases of cervical intraepithelial neoplasia.

Conclusion

The common cause of abnormal uterine bleeding in perimenopausal women is dysfunctional uterine bleeding (47.63% of cases) followed by leiomyoma (31.10% of cases).The main presenting symptom is menorrhagia (53.93% cases) followed by dysmenorrhea (17.32% cases). The commonest organ involved in abnormal bleeding is uterus in 85.43% patients followed by cervix 9.05%, ovary 1.57% and vagina 0.39%. Combined involvement of two or more organs seen in

3.54% cases. The common pattern of endometrium in dysfunctional uterine bleeding is the proliferative type (28.92% of cases).The endometrial pattern commonly observed in the present study is suggestive of anovulatory cycles in perimenopausal age group leading to abnormal bleeding. The clinical and pathological correlation is 81.08% for leiomyoma and 40.47 % for DUB. Histopathological examination not only confirmed the preoperative diagnosis but also helped in diagnosing the cause in clinically unsuspected lesion like adenomyosis which was reported in 13.38% cases and was not diagnosed clinically in the present study. In cases preoperatively considered as DUB, histopathological examination diagnosed lesions like adenomyosis in 33.34% and leiomyoma in 32.25% thus establishing the cause of abnormal uterine bleeding.

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References

1. Gath D., Osborn M., Bungay G., et al. Psychiatric disorder and gynecological symptoms in middle-aged women: A community survey. Br Med J. 1987;294:212-18.
2. JS Bagratee. Menstrual disturbances. Menstrual problems. CME. 2004 February Vol.22 No.2. Available from:http://ajol.info/index.php/cme/article/viewFile [Assessed on 04/06/2018]
3. Rasha Dabash, Jyoti Vajpayee, Martha Jacob, Ilana Dzuba, Nisha Lal, Jan Bradley et al. A strategic assessment of cervical cancer prevention and treatment services in 3 districts of Uttar Pradesh, India. Reproductive Health 2005; 2:11.
4. Jemal A, Thomas A, Murray T, et al. Cancer statistics, 2002. CA Cancer J Clin. 2002;52:23-27.
5. Archana B, Michelle F. Evaluation and histopathological correlation of abnormal uterine bleeding in perimenopausal women. Bombay Hospital Journal. 2010; 52(1):69-72.
6. Maheshwari V, Chakrabarti A, Tyagi S, Sharma R, Alam K, Mohsin S. Endometrial changes in abnormal uterine bleeding. Journal of obstetrics and Gynecology of India. 1996; 46(3):389-94.
7. Muhammad M, Akhtar K, Shahina Y, Mahmood R, Wasim I. Menstrual irregularities with excessive blood loss: a clinicopathological correlation. J Pak Med Assoc. 2005; 55: 486-89.
8. Patel SR, Sheth MS, Rawal MY. Dysfunctional uterine bleeding – the place of hysterectomy in its management. 1986; 32(3): 150-3.
9. Milosevic J, Djordjevic B, Tasic M. Influence of menopausal status on the frequency and pathological features of endometrial hyperplasia and carcinoma in the patient with abnormal uterine bleeding. Acta Medica Medianae. 2008; 47(2): 33-37.
10. Takreem A, Danish N, Razaq S. Incidence of endometrial hyperplasia in 100 cases presenting with polymenorrhagia/menorrhagia in perimenopausal women. J Ayub Med Coll Abbottabad. 2009; 21(2): 60-63.
11. Panda A, Parulekar SV, Gupta A. Diagnostic hysteroscopy in abnormal uterine bleeding and histopathological correlation. J Obstet Gynecol India. 1999;49:74–76.
12. Gupta G, Kotasthane D, Kotasthane V. Hysterectomy: A clinic-pathological correlation of 500 cases. The Internet Journal of Gynecology and Obstetrics. 2010 [cited 2010 Nov 10]; 14(1).Available from:http://www.ispub.com
13. Samaila OA, Adesiyun AG, Agunbiade OA, Mohammed AA. Clinico-pathological assessment of hysterectomies in Zaria. Eur J Gen Med 2009; 6(3): 150-3
14. Shakira P, Subhana T. A clinicopathological review of elective abdominal hysterectomy. Journal of Surgery Pakistan. 2008; 13(1): 26-9.
15. Layla A. Hysterectomy : A clinicopathologic correlation. Baharain Medical Bulletin. 2006; 28(2): 1-6.
16. Tariq S, Humaira T. Histopathological finding in menorrhagia: A study of 100 hysterectomy specimens. Pak J Pathol. 2005; 16(3): 83-5.
17. Shergill SK, Shergill HK, Gupta M, Kaur S. Clinicopathological study of hysterectomies. J Indian Med Assoc. 2002 Apr;100(4):238-9.17.
18. Garuti G, Sambruni I, Colonnelli M, Luerti M. Accuracy of hysteroscopy in Predicting histopathology of endometrium in 1500 women. The Journal of the American Association of Gynecologic Laparoscopists. 2001; 8(2): 207-13.