ABNORMAL UTERINE BLEEDING- UTILITY OF DILATATION AND CURETTAGE IN IDENTIFYING ISOLATED ENDOMETRIAL PATHOLOGY

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ABSTRACT

BACKGROUND

Abnormal uterine bleeding is defined as any bleeding not conforming to the normal cyclical pattern as well as to the normal amount and frequency of menstrual cycle. Abnormal uterine bleeding can occur due to gynaecological as well as medical causes. Gynaecological causes include organic and nonorganic factors. It has various clinical presentations such as menorrhagia, polymenorrhagia, metrorrhagia and intermenstrual bleeding. Dilatation and Curettage (D and C) is a safe and effective outpatient procedure performed in patients with AUB. It provides endometrial tissue for examination of histological variations of endometrium thus guiding in further management.

MATERIALS AND METHODS

This is a retrospective study of patients presenting with AUB over a period of one year (2015-2016) done in the Department of Obstetrics and Gynaecology at a tertiary care hospital. 89 patients with complaints of AUB attributable to isolated endometrial cause were included in the study. Patients with AUB due to vaginal, cervical causes, leiomyomas, adnexal pathology, medical causes and complications of pregnancy were excluded from the study. A structured proforma regarding the patient's complaints, pattern of bleeding, medical, surgical history and a general systemic and pelvic examination was used to evaluate all patients.

RESULTS

Among all the patients who presented with AUB during the study period, 89 patients were identified to have isolated endometrial pathology as a cause of abnormal uterine bleeding. In our study, age of patients presenting with AUB ranged from 24 years to 70 years. AUB was most commonly seen in the age group of 41-50 years (42.6%). Menorrhagia in 32.5% was the most common presentation of AUB. The commonest histopathological finding was proliferative phase endometrium (25.84%) followed by secretory phase endometrium (19.1%). Hyperplasia was observed in 19.1%, which included simple hyperplasia (6.74%), complex hyperplasia without atypia in 2.24% of women and complex hyperplasia with atypia in 10.11%. Glandular stromal dissociation and endometrial polyp each were observed in 7.86% of patients. Disordered proliferative endometrium was observed in 4.49% of patients. Chronic endometritis was seen in 4.5% of cases, which included 2.2% of tuberculous endometritis. Endometrial carcinoma was observed in 2.24% of patients.

CONCLUSIONS

Organic causes of AUB vary according to the age group. Endometrial sampling by D and C is a simple, reliable outpatient procedure to diagnose endometrial lesions. Histopathological examination of the obtained material during the procedure can help in diagnosing the proliferative lesions at an early stage and subsequent treatment preventing its further progression.

KEYWORDS

Abnormal Uterine Bleeding, Dilatation and Curettage, Histopathological Examination.

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BACKGROUND

Abnormal Uterine Bleeding (AUB) is defined as bleeding that does not fall within the normal ranges of amount, frequency, duration or cyclicity of normal pattern of a menstrual cycle.[1] AUB can occur at any age and is the most common complaint in the gynaecological outpatient. It has various clinical presentations such as menorrhagia, polymenorrhagia, metrorrhagia and intermenstrual bleeding. AUB can occur due to a variety of disorders involving organic, systemic or hormonal causes. Pregnancy-related complications and dysfunctional uterine bleeding are common in reproductive age group of women while atrophy and organic lesions are more frequently seen in older individuals. Hyperplasia with or without atypia and endometrial carcinomas are more commonly seen in postmenopausal women.[2] Dilatation and Curettage (D and C) is a safe and effective outpatient procedure performed in patients with AUB. It provides endometrial tissue for examination of histological variations of endometrium thus guiding in further management.[3,4]

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MATERIALS AND METHODS

The present study is done to evaluate endometrial histological patterns in women presenting with AUB and to correlate histopathological findings with clinical features in different age groups. This is a retrospective study of patients presenting with AUB over a period of one year (2015-2016) done in the Department of Obstetrics and Gynaecology at a tertiary care hospital. 89 patients with complaints of AUB attributable to isolated endometrial cause were included in the study. Patients with AUB due to vaginal, cervical causes, leiomyomas, adnexal pathology, medical causes and complications of pregnancy were excluded from the study. A structured proforma regarding the patient's complaints, pattern of bleeding, medical, surgical history and a general systemic and pelvic examination was used to evaluate all patients. Routine laboratory investigations and ultrasound findings were also noted. Endometrial sampling was done by D and C and the tissue was fixed in 10% buffered formalin solution. Routine Haematoxylin and Eosin (H and E) staining was done.

RESULTS

Among all the patients who presented with AUB during the study period, 89 patients were identified to have isolated endometrial pathology as a cause of abnormal uterine bleeding. In our study, age of patients presenting with AUB ranged from 24 years to 70 years. AUB was seen in 42.6% of women in the age group of 41-50 years followed by 26.9% in the age group of 31-40 years. 4.5% of the study group presented with postmenopausal bleeding in the age group of 61-70 years. Age wise distribution and incidence of abnormal bleeding in various age groups is shown in (Table 1).

Various modes of presentation of AUB such as menorrhagia, metrorrhagia, polymenorrhagia and postmenopausal bleeding were evaluated. Menorrhagia in 32.5% was the most common presentation of AUB. Postmenopausal bleeding was noted in 20.2% of the patients followed by polymenorrhagia (19.1%). Metrorrhagia was the presenting complaint in 13.4% of women with AUB. 3.37% of patients with history of carcinoma breast on tamoxifen therapy and 3.37% of patients presenting with hypomenorrhoea being evaluated for infertility were included in the miscellaneous group and also evaluated for AUB (Table 2).

Age wise distribution of clinical presentation of AUB is shown in Table 3. Menorrhagia was found to be the commonest presentation in the reproductive age group while metrorrhagia and polymenorrhagia was found to be higher in perimenopausal women. Three patients who presented with hypomenorrhoea and three patients with a known history of breast cancer, now on tamoxifen were included in the miscellaneous group.

All 89 patients included in the study underwent a D and C and the endometrial pattern associated with AUB was noted. The commonest histopathological finding was proliferative phase endometrium (25.84%) (Figure 1A) followed by secretory phase endometrium (19.1%). Hyperplasia was observed in 19.1%, which included simple hyperplasia (6.74%), complex hyperplasia without atypia in 2.24% of women and complex hyperplasia with atypia in 10.11% (figure 1C), glandular stromal dissociation (figure 1B) and endometrial polyp each were observed in 7.86% of patients. Disordered proliferative endometrium was observed in 4.49% of patients. Chronic endometritis was seen in 4.5% of cases, which included 2.2% of tuberculous endometritis. Endometrial carcinoma was observed in 2.24% of patients (figure 1D).

Age Group	Number of Patients with AUB	Percentage %
21-30	8	8.9%
31-40	24	26.9%
41-50	38	42.6%
51-60	15	16.8%
61-70	04	4.5%

Table 1. Age Wise Distribution

Clinical Presentation	Number of Patients	Percentage %
Menorrhagia	29	32.5%
Metrorrhagia	12	13.4%
Polymenorrhagia	17	19.1%
Intermenstrual bleeding	07	7.8%
Postmenopausal bleeding	18	20.2%
Miscellaneous	06	6.7%

Table 2. Clinical Presentation with Percentages

Clinical Presentation	21-30	31-40	41-50	51-60	61-70
Menorrhagia	05	11	13	00	00
Metrorrhagia	00	04	07	01	00
Polymenorrhagia	01	06	08	02	00
Intermenstrual bleeding	00	02	03	02	00
Postmenopausal bleeding	00	00	05	09	04
Miscellaneous	02	00	03	01	01

Table 3. Age Wise Distribution of Clinical Presentation

Histopathology	Number of Patients	Percentage
Proliferative Phase	23	25.84%
Secretory Phase	17	19.10%
Glandular Stromal Dissociation	08	8.98%
Atrophic Endometrium	03	3.37%
Simple Hyperplasia	06	6.74%
Complex Hyperplasia (With and Without Atypia)	11	12.35%
Inactive Endometrium	02	2.24%
Disordered Proliferative Endometrium	04	4.49%
Endometrial Polyp	07	7.86%
Chronic Endometritis	02	2.24%
Tubercular Endometritis	02	2.24%
Endometrial Carcinoma	02	2.24%
Un assessable Tissue	02	2.24%

Table 4. Histopathological Incidence in the Study

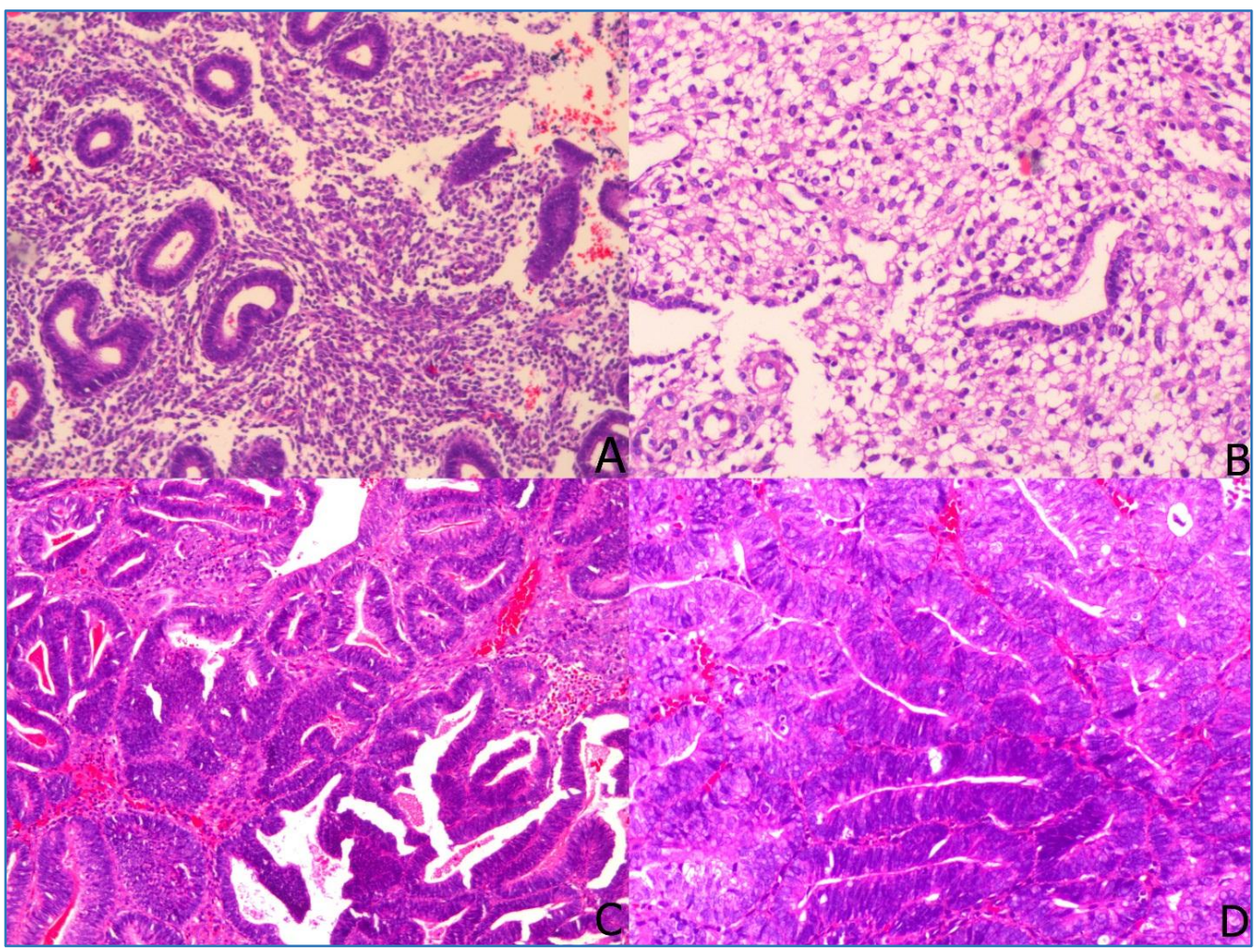

Figure 1A. Proliferative Phase (H and EX100)
1B. Glandular Stromal Dissociation (H and EX100)
1C. Complex Hyperplasia with Atypia (H and EX100)
1D. Adenocarcinoma (H and EX200)

DISCUSSION

Abnormal uterine bleeding is defined as any bleeding not conforming to the normal cyclical pattern as well as to the normal amount and frequency of menstrual cycle. AUB is the most common complaint for gynaecological consultation across all age groups[5] and accounts for 20% of all outpatient gynaecological consultations.

Abnormal uterine bleeding can occur due to gynaecological as well as medical causes. Gynaecological causes include organic and nonorganic factors.[6] Histopathological examination of endometrium obtained by D and C helps to identify the organic causes offering definitive treatment and also helps to determine the common causes of AUB across different age groups.

In our study, 42.6% of patients with AUB were in the age group of 41-50 years. Menorrhagia (34.21%) was the commonest complaint in this age group. Bhosle et al[7] reported an incidence of 53.3% in the perimenopausal and postmenopausal patients.

Proliferative lesions were commonly seen in the age group of 41-50 years and 51-60 years. A similar incidence was reported by Yousuf et al[8] and Muzaffar et al.[9] In our study, endometrial polyps (57.14%) and hyperplasia (simple and complex) were most commonly seen in the age group of 41-50 years. 35.34% of hyperplasia's occurred in the age group of 51-60 years. The incidence of endometrial polyp as quoted in literature is 10-24% and increases with increasing age.[10] Endometrial polyps constituted 4.49% of all the lesions in our study. Mahapatra et al[11] reported an incidence of 3.6%.

All the cases of endometrial carcinomas in our study were reported in the postmenopausal age group. Sarwat Ara et al[12] also reported endometrial carcinomas in a similar age group with an incidence of 1.86%. Occurrence of endometrial carcinoma in an older age group indicates progression from hyperplasia. The low incidence of endometrial carcinomas (2.24%) also indicates the advantage of diagnosing hyperplasia at an early age and preventing its further progression.

In our study across the age groups from 21-50 years, the predominant histopathological finding was normal physiological pattern of endometrium. Bleeding attributable to proliferative phase maybe due to anovulatory cycles, which are common around puberty and perimenopausal age groups. In our study, 43.47% of proliferative endometrium occurred in the age group of 41-50 years. Abnormal bleeding during secretory phase could be attributable to inadequate luteal phase.

Glandular stromal dissociation associated to hormonal therapy/imbalance constituted 7.5% of all the cases. Majority of these were observed in the younger age groups of 21-30 and 31-40 years. 71.42% of these patients gave a history of intake of combined hormonal therapy. Increased endometrial thickness due to hormonal therapy was responsible for breakthrough bleeding.

In our study, 2.2% of women in age group of 21-30 years who presented with hypomenorrhoea and were being evaluated for infertility were diagnosed as tubercular endometritis based on demonstration of granulomas with epithelioid cells with Langhans giant cells and foci of necrosis. Chronic endometritis diagnosed based on predominance of plasma cells was seen in 2.2% of all cases. Muzaffar et al[8] reported an incidence of 10.2%. These were observed in the age group of 51-60 years.[2]

In our study, 3.37% of patients with a known history of breast cancer, now on adjuvant chemotherapy with tamoxifen underwent dilatation and curettage to rule out atypical endometrial hyperplasia. Hyperplasia without atypia was seen in 2.24% of patients, while 1.12% of patients were found to have an endometrial polyp. In a large study conducted by Deligdisch et al[13] one-third of their patients had benign endometrial pattern and endometrial cancers that were identified were high grade and invasive.

Disordered proliferative phase endometrium was seen mostly in the age group of 31-40 years in our study. Disordered proliferative endometrium is an exaggerated proliferative phase, which resembles a simple hyperplasia pattern, which is focal.[2] This finding was reported more in perimenopausal age group by Sajitha et al.[14] Disordered proliferative phase endometrium lies at one end of the spectrum of proliferative lesions.[6] This pattern of endometrium constituted 4.49% of all our cases. Sajitha et al[14] had an incidence of 12.2%.

Atrophic endometrium is the most common cause of postmenopausal bleeding in elderly age group. Thin-walled vessels lying superficial to the expanding cystic glands bleed easily leading to uterine bleeding.[6] All the cases of atrophic endometrium in our study were seen in the age group of 51-60 years and 61-70 years. Incidence of atrophic endometrium was 3.37% in our study. Cornitescu et al[15] reported an incidence of 4.34% in their study.

In our study, 2.24% of patients in postmenopausal age group has presented with postmenopausal bleeding. On ultrasound, thin endometrium was noted and D and C yielded inadequate endometrial sample. A prospective study by Van Doorn et al[16] implied that an insufficient sample with an endometrial thickness of 5 mm or more should not be reassured, but investigated further to rule out a proliferative lesion.

CONCLUSIONS

Organic causes of AUB vary according to the age group. Endometrial sampling by D and C is a simple, reliable outpatient procedure to diagnose endometrial lesions. Clinical information regarding last menstrual period, duration of bleeding, parity, hormonal therapy and ultrasound findings are important for interpretation of the endometrial tissue sampled. AUB can be early sign of underlying ominous pathology; hence, endometrial sampling and histopathological examination form an important diagnostic tool for early detection of neoplastic lesions.

REFERENCES

1. Munro MG, Critchley HO, Fraser IS, et al. The FIGO classification of causes of abnormal uterine bleeding in the reproductive years. Fertil Steril 2011;95(7):2204-2208.
2. Mazur MT, Kurman RJ. Normal endometrium and infertility evaluation. In: Mazur M, Kurman RJ, eds. Diagnosis of endometrial biopsies and curettings: a practical approach. 2nd edn. New York: Springer Verlag 2005:7-33.
3. Svirsky R, Smorgick N, Rozowski U,et al. Can we rely on blind endometrial biopsy for detection of focal intrauterine pathology? Am J Obstet Gynecol 2008;199(2):115.e1.
4. Jignash P, Deepak D. Study of endometrial pathology in abnormal uterine bleeding. Int J Reprod Contracept Obstet Gynecol 2013;2(2):182-185.

5. Goldstein SR. Menorrhagia and abnormal bleeding before the menopause. Best Pract Res Clin Obstet Gynaecol 2004;18(1):59-69.
6. Doraiswami S, Johnson T, Rao S, et al. Study of endometrial pathology in abnormal uterine bleeding. J Obstet Gynaecol India 2011;61(4):426-430.
7. Bhosle A, Fonseca M. Evaluation and histopathological correlation of abnormal uterine bleeding in perimenopausal women. Bombay Hospital Journal 2010;52(1):69-72.
8. Yusuf NW, Nadeem R, Yusuf AW, et al. Dysfunctional uterine bleeding. A retrospective clinicopathological study over 2 years. Pak J Obstet Gynaecol 1996;9:27-30.
9. Muzaffar M, Akhtar KA, Yasmin S, et al. Menstrual irregularities with excessive blood loss: a clinico-pathological correlation. J Pak Med Assoc 2005;55(11):486-489.
10. ACOG Committee on Gynecologic Practice. Committee Opinion: 263, December 2001. von Willebrand's disease in gynecologic practice. Obstet Gynecol 2001;98(6):1185-1186.
11. Mahapatra M, Mishra P. Clinicopathological evaluation of abnormal uterine bleeding. J Health Res Rev 2015;2(2):45-49.
12. Ara S, Roohi M. Abnormal uterine bleeding: histopathological diagnosis by conventional dilatation and curettage. Professional Med J 2011;18(4):587-591.
13. Deligdisch L, Kalir T, Cohen CJ, et al. Endometrial histopathology in 700 patients treated with tamoxifen for breast cancer. Gynecol Oncol 2000;78(2):181-186.
14. Sajitha K, Padma SK, Shetty KJ, et al. Study of histopathological patterns of endometrium in abnormal uterine bleeding. CHRISMED J Health Res 2014;1(2):76-81.
15. Cornitescu FI, Tanase F, Simionescu C, et al. Clinical, histopathological and therapeutic considerations in non-neoplastic abnormal uterine bleeding in menopause transition. Rom J Morphol Embryol 2011;52(3):759-765.
16. van Doorn HC, Opmeer BC, Burger CW, et al. Inadequate office endometrial sample requires further evaluation in women with postmenopausal bleeding and abnormal ultrasound results. International Journal of Gynecology & Obstetrics 2007;99(2):100-104.