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Evaluation of causes of AUB in hysterectomy specimens in women in different age groups: A Retrospective study of 5 years

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Abstract
Objectives: *To find the incidence of leiomyoma and endometrial lesion as the cause of AUB in women in different age groups.*
Materials and Methods: *A retrospective study was conducted on 612 of patients presenting with abnormal uterine bleeding over period of five years.*
Result: *Age of patients ranged from 17 to 79 year. Most commonly encountered in 4th Decade of life. The commonest pathology irrespective of the age group was disordered proliferative pattern. In my study among 612 patient undergoing hysterectomy causes were leiomyoma (68%), Adenomyosis (08 %), Leiomyoma and adenomyosis (15 %),Endometrial polyp(3 %) Endometrial hyperplasia (3.1 %) endometrial carcinoma (3.2%).*
Discussion: *Abnormal uterine bleeding is the most common cause for a women to consult a gyneacologist. Etiology is different for various age groups. Maximum cases of AUB in our study was observed in perimenopausal age group. Leiomyoma is common finding in women with AUB followed by adenomyosis. Cases of endometrial polyp and endometrial carcinoma reported mostly occurs in postmenopausal age group.*
Conclusion: *In this study leiomyoma was found to be the most common cause for AUB and hysterectomies, followed by adenomyosis in women with peak incidence in the perimenopausal age group.*
Keywords: *Abnormal uterine bleeding, Leiomyoma, Endometrial lesion.*

Introduction

Abnormal uterine bleeding is clinically referred to as bleeding which is not attributable to an underlying organic pathologic condition. It is a common cause of bleeding in women of reproductive age group. It can be defined as a variation from the normal menstrual cycle. This variation in the cycle can be in regularity, frequency, duration of flow or amount of blood loss. Often the bleeding is "heavy," which is "excessive menstrual blood loss which interferes with a woman's physical, social, emotional and/or material quality of life[1] For women with uterine fibroids, everyday life is often disrupted and fibroids remain a leading indication for hysterectomy[2,3] and it is the definitive treatment for DUB; in most studies it has a higher rate of patient satisfaction than does hysteroscopic endometrial ablation. Uterine fibroid, adenomyosis, polyp (endometrial and endocervical), endometrial hyperplasia and malignancy are the structural causes for AUB. Leiomyoma are noted clinically in 20-30 % of women over 30 years of age and are found in as many as 75 % of hysterectomy specimen. Its clinical presentation depends on their size and

location, at larger sizes, they may cause compression of the renal tract and pelvic vasculature leading to impaired renal function and venous thromboembolism, respectively. Conversely, many women with fibroids will be entirely asymptomatic.[4]

Materials and Methods

This was a prospective study done on patients presenting with AUB. Patients were selected based on clinical details. The study material included a total number of 612 cases over a period of five years.

Results

During this five year period a total of 612 cases are studied. Age of patients with AUB ranged from 17 to 79 year in our study. Most commonly encountered in 4th Decade of life. The commonest pathology irrespective of the age group was disordered proliferative pattern. In my study among 612 patient undergoing hysterectomy causes were leiomyoma (68%), Adenomyosis (08 %), Leiomyoma and adenomyosis (15 %), Endometrial polyp (3 %) Endometrial hyperplasia (3.1 %) endometrial carcinoma (3.2%).

Histopathological Diagnosis	Age group (in years)					
	21-30 Yr	31-40 Yr	41-50 Yr	51-60 Yr	61-70 Yr	Total
Leiomyoma	24(5.7%)	90(21.6 %)	240(57.6%)	40(9.6 %)	22(5.2%)	416
Leiomyoma &Adenomyosis	0	14(15.3%)	56(61.5%)	19(20.8%)	2(2.1%)	91
Adenomyosis	0	2(4.1%)	32(66.6%)	14(29.1%)	0	48
Hyperplasia without atypia	1(6.6%)	8(53.3%)	5(33.3%)	1(6.6%)	0	15
hyperplasia with atypia	0	0	1(25%)	3(75%)	0	04
Endometrial Polyp	0	3(16.7%)	9(50%)	6(33.3%)	0	18
Endomrtrial Adenocarcinoma	0	0	2(10.0%)	5(25.0%)	13(65%)	20
Total	25(4.0%)	117(19.1%)	345(56.3%)	88(14.3%)	57(9.3%)	612

Table 1 Cases presenting with AUB.

Total number of caeses of AUB	612
Leiomyoma	416 (68 %)
Leiomyoma and Adenomyosis	91 (15%)
Adenomyosis	48 (8%)
Endometrial Polyp	18 (3%)
Endometrial Hyperplasia	19 (3.1 %)
Endometrial Carcinoma	20 (3.2%)

Table 2 Age wise distribution of cases of AUB with histrectomy specimen

Histopathological Diagnosis	Age group (in years)					
	21-30 Yr	31-40 Yr	41-50 Yr	51-60 Yr	61-70 Yr	Total
Leiomyoma	24(5.7%)	90(21.6 %)	240(57.6%)	40(9.6 %)	22(5.2%)	416
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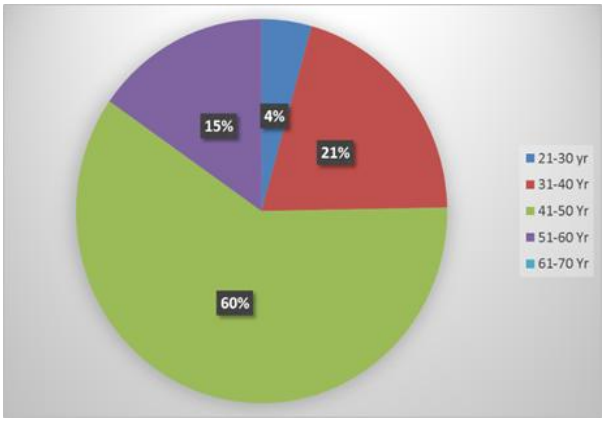
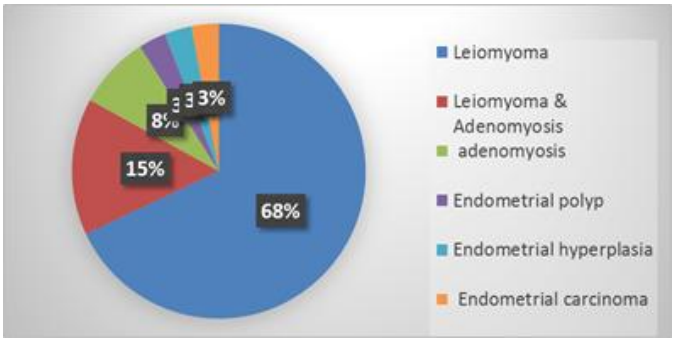


Incidence of endometrial lesion in hysterectomy specimens

Table 3 Common age group affected.

Age group(in Yr)	Cases
21-30	25(4%)
31-40	117(19%)
41-50	345(56.3%)
51-60	88(14.3%)
61-70	57(9.3%)



Discussion

Abnormal uterine bleeding is the most common cause for a women to consult a gyneacologist. It is a clinical term used to describe not attributable to an underlying organic pathologic condition. The causes of abnormal uterine bleeding include a wide spectrum of diseases of the reproductive system and non-gynecologic causes as well. Organic cause of abnormal uterine bleeding maybe subdivided, into reproductive tract disease, iatrogenic causes and systemic disease. When an organic cause of AUB cannot be found, then by exclusion, a diagnosis of dysfunctional uterine bleeding (DUB) is assumed.Symptoms of AUB frequently co-exist with fibroids, but the relationship between AUB and fibroids remains incompletely understood. In many women, fibroids may be an incidental innocent bystander in the underlying aetiology of a menstrual bleeding complaint. A structured approach to establishing the cause using the FIGO PALM-COEIN classification system will facilitate accurate diagnosis and inform treatment options.[5] Up to 30% of women will seek medical assistance for this problem during their reproductive years[6] In about 25% of the patients, the abnormal uterine bleeding is the result of a well defined organic abnormality[7,8]. Etiology is different for various age groups. The routinely performed noninvasive investigations for abnormal uterine bleeding include complete blood count, platelet count, prothrombin time (PT), Activated partial thromboplastin time (APTT) and liver function test to rule out any coagulation and bleeding

disorders and imaging studies such as pelvic ultrasound (USG). Our study significantly revealed that the occurrence of menstrual disorders increases with advancing age. The commonest age group presenting with excessive bleeding in our study was 41–50 years. A similar incidence was reported by Yusuf et al. and Muzaffar et al in their study of endometrium.[9,10] Maximum cases of AUB in our study was observed in perimenopausal age group (fourth decade of life). Leiomyoma is common finding in women with AUB followed by adenomyosis, common in perimenopausal age group.Fibroids are associated with sub fertility, miscarriage, preterm labour and obstruction of labour. In addition, they may cause discomfort and pressure symptoms, typically urinary. In rare circumstances, at larger sizes, they may cause compression of the renal tract and pelvic vasculature leading to impaired renal function and venous thromboembolism, respectively. Conversely, many women with fibroids will be entirely asymptomatic[12] However, many women most commonly present to gynaecological services with AUB and associated iron-deficiency anaemia. For women with uterine fibroids, everyday life is often disrupted and fibroids remain a leading indication for hysterectomy.[13,14] Conservative estimates of annual direct treatment costs and indirect costs from lost work hours as a result of fibroids are $4.1–9.4 billion and $1.55–17.2 billion, respectively[15] The incidence of AUB between 51 and 70 years was lower as compared to those between 41 and 50 years. The reason for this finding may be due to the fact that the patients were evaluated much earlier and treated appropriately thereby decreasing the incidence in later age group. Cases of endometrial polyp and endometrial carcinoma reported mostly occurs in postmenopausal age group. Endometrial polyps are epithelial proliferations arising from the endometrial stroma and glands. The majority are asymptomatic. The contribution of polyps to AUB varies widely ranging from 3.7% to 65%[16 ,17] but it is widely accepted[18]. In our study the incidence of polyp is 3 %. The incidence of polyps as with fibroids increases with age and both pathologies may frequently co-exist, or suspected polyps visualised on transvaginal ultrasound scanning (TV-USS) may be mistaken for SM fibroids and vice-versa.[19] The relationship between adenomyosis and AUB remains unclear,[20] particularly with regard to wide variations in histopathological diagnosis reflecting variations in criteria used and also improved radiological diagnosis. Typically, adenomyosis is associated with increasing age and may co-exist with fibroids. Furthermore, adenomyosis may be both focal and diffuse and it may be harder to establish diagnosis if fibroids are also present [21] In the present study incidence of carcinoma endometrium was more common in the 61–70 years age group. The result of this study was almost similar to data mentioned by Yusuf et al. and Escoffery et al. in their study[9,11]

Conclusion

The causes for Abnormal uterine bleeding is variable. In this study leiomyoma was found to be the most common cause for AUB and hysterectomies, followed by adenomyosis in women with peak incidence in the perimenopausal age group (41-50 years).

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