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Original Research Article

A study on histopathological spectrum of hysterectomy specimens for abnormal uterine bleeding in a tertiary hospital in Madhya Pradesh

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ABSTRACT

Background: AUB (abnormal uterine bleeding) impacts the quality of life of women. Leiomyoma and adenomyosis are the most common cause of AUB. For exact diagnosis, histopathological examination of hysterectomy specimen is required. Sometimes in histopathology we find carcinomas and other pathologies. So, it is clear that histopathological examination of the hysterectomy specimen should always be done. In our study also we had two cases of carcinoma detected on histopathology.

Methods: In our study we took 100 patients coming to Obstetrics and Gynaecology department at Sukh Sagar Medical College and Hospital for a period of fourteen months from March 2024 to May 2025. A total of 100 patients of reproductive age group, perimenopausal and post-menopausal women with diagnosis of abnormal uterine bleeding who underwent abdominal hysterectomy were taken.

Results: A total of 100 cases were included in our study. Maximum number of patients were in the 36-42 years age group. Heavy menstrual bleeding was the commonest clinical presentation. Leiomyoma in the uterus, chronic cervicitis in the cervix and follicular cysts in the ovaries were the commonest histopathology noted. One specimen showed endometrial carcinoma and one specimen had leiomyosarcoma.

Conclusions: The findings in present study emphasise the importance of histopathological examination of all hysterectomy specimens to detect malignancies even in the cases which suggest a benign pathology on preoperative assessment.

Keywords: Adenomyosis, AUB, Histopathology, Hysterectomy, Leiomyoma

INTRODUCTION

ACOG defines AUB (abnormal uterine bleeding) as any bleeding from uterus that deviates from the normal menstrual cycle in terms of regularity, frequency, volume or duration impacts the quality of life of women. In India prevalence of AUB is around 17.9%.¹ The FIGO has developed a standardized system called PALM-COEIN which categorises AUB into structural (PALM) and non-structural (COEIN).² For the final diagnosis, histopathological examination of hysterectomy specimen

is needed. Leiomyoma and adenomyosis are the two most common cause of AUB. Hysterectomy is the definitive treatment of fibroids, adenomyosis not responding to medical treatment. A number of minimally invasive surgical options like endometrial ablation, thermal balloon therapy and uterine artery embolization but restricted availability and cost factor limit their use.^{3,4}

This study aimed at finding the spectrum of histopathological findings in hysterectomy specimens

from AUB patients and a fair chance to find malignant lesions.

METHODS

Our study was a retrospective study conducted in the Department of Obstetrics and Gynaecology at Sukh Sagar Medical college and hospital for a period of 14 months from March 2024 to May 2025. A total of 100 patients of reproductive age group, perimenopausal and post menopausal women with diagnosis of abnormal uterine bleeding who underwent abdominal hysterectomy. Patients age, symptoms and parity were recorded. The specimens were sent for histopathology in the department of pathology. Patients were classified on the basis of age, parity, indication of hysterectomy and histopathology of specimens.

Inclusion criteria

Inclusion criteria included all abdominal hysterectomy specimens done for AUB.

Exclusion criteria

Exclusion criteria were specimens with preoperative confirmed diagnosis of malignancy, specimens of vaginal hysterectomy, hysterectomies done for tubo-ovarian masses and obstetric hysterectomy.

Statistical analysis

The data was analysed using SPSS version 26 software.

RESULTS

A total of 100 cases were included in our study. The patients were in the age group 26-35 years with maximum patients in the 36-42 years age group. Majority of the patients were in the age group 36-45 (42%) years followed by 46-55 years (39%) (Table 1).

Table 1: Age wise distribution of cases (n=100).

Age group (in years)	Frequency (N)	Percentage (%)
26-35	9	9
36-45	42	42
46-55	39	39
56-65	9	9
>65	1	1

Most women were P2 i.e. 39% (Table 2).

Majority patients presented with heavy menstrual bleeding (45%) followed by dysmenorrhea with HMB (23%), HMB with irregular bleeding (14%), irregular bleeding (10%), dysmenorrhea (5%) and post menopausal bleeding (3%).

Table 2: Parity wise distribution of cases (n=100).

Parity	Frequency (N)	Percentage (%)
P0	2	2
P1	23	23
P2	39	39
P3	30	30
≥P4	6	6

Table 3: Distribution of patients according to clinical symptoms.

Symptom	Frequency (N)	Percentage (%)
HMB	45	45
Dysmenorrhea with HMB	23	23
Dysmenorrhea	5	5
HMB with irregular bleeding	14	14
Irregular bleeding	10	10
Post menopausal bleeding	3	3

Table 4: Distribution of histological findings of hystrectomy specimen (n=100).

Anato-mical site	Type of lesion	Number (N)	Percentage (%)
Cervix	Chronic cervicitis	17	17
	Nabothian cyst with chronic cervicitis	6	6
	Papillary endocervicitis	11	11
	Squamous metaplasia	7	7
	Leiomyoma	0	0
	Unremarkable	57	57
	Squamous cell carcinoma	0	0
Endometrium	Proliferative phase	42	42
	Secretory phase	06	06
	Simple hyperplasia	17	17
	Benign endometrial polyp	06	06
	Endometritis	10	10
	Endometrial carcinoma	01	01

Continued.

Anato-mical site	Type of lesion	Number (N)	Percentage (%)
	Adenomyoma	03	03
	Disordered endometrium	10	10
	Atrophic endometrium	05	05
Myometrium	Leiomyoma	56	56
	Adenomyosis	1	13
	Leiomyoma with adenomyosis	17	17
	Leiomyosarcoma	01	01
	Invaded by endometrial carcinoma	01	01
	unremarkable	12	12
Ovaries	Follicular cysts	7	7
	Corpus luteal cyst	2	2
	Serous cystadenoma	0	0
	Unremarkable	91	91
Fallopian tubes	Paratubal cysts	07	07
	Unremarkable	93	93

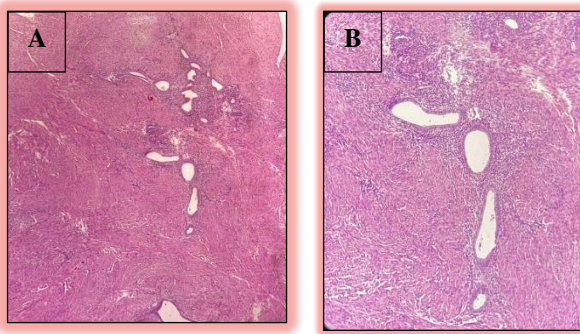


Figure 1: Adenomyosis.

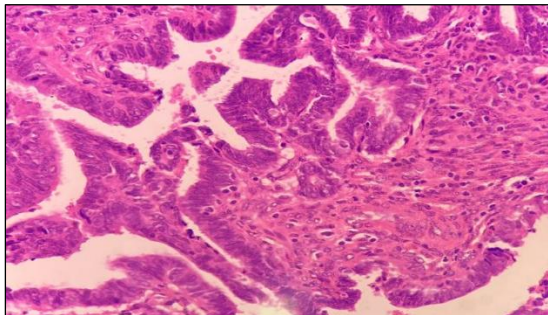


Figure 2: Endometrial carcinoma.

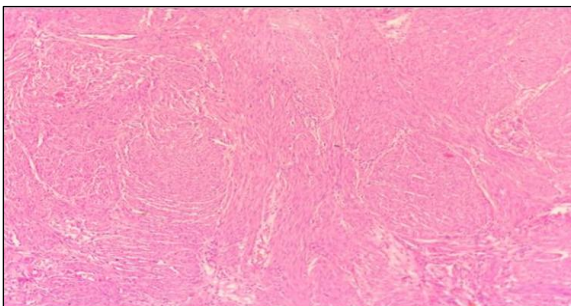


Figure 3: Leiomyoma.

On histopathological examination, most of the hysterectomy specimens did not show any significant pathology in cervix, fallopian tubes and ovaries. Endometrium was proliferative type in majority of patients (42%) and myometrium showed leiomyoma in 56% cases.

DISCUSSION

AUB hampers the life quality of 10-25% women. Therefore, early diagnosis and timely intervention can help them lead a healthy life. Evaluation of AUB is achieved with a combination of history, physical examination and lab investigations, ultrasonography and endometrial sampling.

In our study, maximum number of patients (42%) were in the age group between 36 to 45 yrs followed by 39% patients in age group 46 to 55 yrs. In a study conducted by Rashmi et al, the maximum patients (42.72%) were in age range of 35 to 45 yrs.⁵ A retrospective study by Cereus et al also showed similar age distribution. In a study conducted by Gazala et al, the highest frequency of hysterectomy was observed in the age group of 40 -49 yrs accounting for 39% of all cases. The least number of cases were performed in the age group of 70 -79 years.⁶

In our study maximum patents who underwent hysterectomy for AUB were Para 2 (39%) followed by Para 3 (30%). In a study conducted by Santha et al, majority of patients were Para 2 (68%) and just 2% were nulliparous.⁷

In our study, 45% patients had heavy menstrual bleeding and 23% had heavy menstrual bleeding with dysmenorrhea. Only 3% patients had post-menopausal bleeding. In a study conducted by Seetha et al, 37% patients had heavy menstrual bleeding and 8 % patients had postmenopausal bleeding.⁸

In a study conducted by Munro et al, irregular and intermenstrual bleeding, prevalence was upto 35%.⁹ In a study conducted by Ashwin et al, 26.67% patients had postmenopausal bleeding.¹⁰ In the same study 36.7% of the study participants had dysmenorrhea. In our study 5% patients had dysmenorrhea.

In a study by Shergill et al, heavy menstrual bleeding was found to be the most common presenting complaint (66%) in patients undergoing hysterectomy.¹¹

In a study conducted by Wankhade et al, chronic cervicitis was the most common cervical lesion, comprising 85 (77.28%) cases.¹² Chronic cervicitis with squamous metaplasia was observed in 13 patients (11.82%). Six (5.46%) cases were papillary endocervicitis and three (2.73%) cases were cervical fibroids.

In our study 57 patients (57%) had unremarkable cervix, 17 (17%) patients had chronic cervicitis, 6 (6%) had nabothian cysts with chronic cervicitis, 11 (11%) had papillary endocervicitis, 1 (1%) patient had benign endocervical polyp and 7 (7%) patients had squamous metaplasia with chronic cervicitis.

In our study, 42 (42%) cases had proliferative phase of endometrium, 06 (6%) cases had secretory phase endometrium, 05 (5%) had atrophic endometrium, 06 (6%) had endometrial polyp, 3 (3%) adenomyoma, 10 (10%) had endometritis. 17 (17%) had simple endometrial hyperplasia, 1 (1%) had endometrial carcinoma and 10 (10%) had disordered endometrium.

In a study conducted by Pandya et al, 94 (37.6%) cases had proliferative endometrium, 110 (44%), 09 (3.6%) had disordered proliferative endometrium, 17 (6.8%) had atrophic endometrium, 01 (0.4) had necrotic endometrium, 03 (1.2%) had sloughed off endometrium and endometrial carcinoma was seen in 01 (0.4%) cases.¹²

In our study, 91 (91%) cases had unremarkable ovaries, 7 (7%) cases had follicular cysts and 2 (2%) cases had corpus luteal cysts. In a study conducted by Kshama et al, 5 (6.57%) cases had follicular cysts and 62 (81.57%) had unremarkable ovaries in the same study 68 (89.47%) had unremarkable fallopian tubes and 8 (10.52%) cases had para tubal cysts.¹⁴

In our study 93 (93%) had unremarkable fallopian tubes and 7 (7%) had paratubal cysts.

This study is limited by its small sample size, which may affect the generalizability of the findings. Larger studies are needed to confirm these results.

CONCLUSION

In our study the most common histopathology associated with AUB is leiomyoma. But 1 specimen shown endometrial carcinoma and 1 specimen had

leiomyosarcoma. These findings emphasise the importance of histopathological examination of all histopathological specimen to detect malignancies even in the cases which suggest a benign pathology on preoperative assessment.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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