

HISTOPATHOLOGY OF ENDOMETRIAL CARCINOMA PRESENTING WITH ABNORMAL UTERINE BLEEDING

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Abstract

Background: The aims & objective is to study histomorphology of endometrium in patients of endometrial carcinoma presenting with abnormal uterine bleeding. **Materials and Methods:** The study included histopathological findings of endometrium sent as curettings, biopsy and hysterectomy in the department of Pathology with the complaints of abnormal uterine bleeding. The study was conducted over a period of 2 years. **Result:** Endometrial carcinoma was diagnosed in 17 (2.3%) cases out of 719 cases presenting with abnormal uterine bleeding. Out of these, endometrioid carcinoma constituted 15 (88.4%). Among the endometrioid carcinomas, most commonly seen were FIGO grade 2, which constituted about 10 cases (66.6%). One case each of adenosquamous, papillary serous adenocarcinoma and squamous cell carcinoma of cervix and endometrium were also seen. **Conclusion:** The study highlights the association of endometrial carcinoma with abnormal uterine bleeding, hence histopathological examination of endometrium is very important and useful. It should be done in all cases of abnormal uterine bleeding and specific diagnosis could help the physician to plan further therapy for successful management.

INTRODUCTION

Abnormal uterine bleeding (AUB) is a common gynaecological symptom. It affects 14-25% of women of reproductive age group and is a common symptom of malignancy.^[1] The FIGO working group on menstrual disorders has developed a classification system PALM-COEIN for causes of AUB². AUB is also one of the common symptom in case of malignancy. Endometrial cancer is the most common cause of AUB associated malignancy (AUB-M). Endometrial cancer has a world-wide incidence of 9 per 100 000 women, with a 1% lifetime risk.^[2] Most cases are in women aged >50 years. The vast majority of patients with endometrial cancer (91%), have postmenopausal bleeding as their presenting complaint. Although endometrial cancer occurs primarily in postmenopausal, up to 14% of those afflicted are premenopausal, 4.5 % of whom are under 40 years age.^[3] Endometrial sampling and biopsy is recommended in women with postmenopausal bleeding. The American College of Obstetrician and Gynaecologists (ACOG) recommends performing endometrial sampling in women aged 45 years old or in younger women with abnormal uterine bleeding and some risk factors such

as obesity, failed medical treatment or persistent bleeding.^[4]

Endometrioid carcinoma of the endometrium is the most common histological subtype of endometrial carcinoma and accounts for 80-90% of cases. On the other hand pure primary squamous cell carcinoma and adenosquamous carcinoma of uterus are extremely rare, accounting <1% and about 5% of all the uterine malignancies respectively.^[5,6]

On histological examination, endometrioid carcinomas are characterized by glandular pattern resembling normal endometrium. A three-step grading system is applied to endometrioid tumours.

- **Grade 1:** having 5% or less of solid growth.
- **Grade 2:** between 6% and 50% solid growth.
- **Grade 3:** more than 50% solid growth.

MATERIALS AND METHODS

The study was conducted over a period of 2 years in the Department of Pathology. The specimens were processed, stained as per the routine protocol and histopathological findings noted. Clinical details of the patients were noted down from requisition forms and medical records.

Inclusion Criteria

All the specimens sent as curettings, biopsy and hysterectomy received in the Department of Pathology with clinical diagnosis of abnormal uterine bleeding were included in the study.

Exclusion Criteria

Abnormal uterine bleeding due to obstetrical causes.

RESULTS

Endometrial carcinoma was diagnosed in 17 (2.3%) cases out of 719 cases. The age ranged from 40-85 years. Thirteen cases (82.4%) belonged to 51-85 years age group [Table 1]. Sixteen (94%) cases presented with postmenopausal bleeding. Out of 17 cases, endometrioid carcinoma constituted 15 (88.4%), of which well differentiated endometrioid carcinoma (FIGO grade 1) constituted 1 case (6.7%). Moderately differentiated endometrioid carcinoma (FIGO grade 2) constituted 10 cases (67%). Poorly differentiated endometrioid carcinoma (FIGO grade 3) constituted 3 cases (20%).

On histological examination, endometrioid carcinomas are characterized by glandular patterns with abnormal morphology showing irregular outlines. A three step grading system is applied to endometrioid carcinoma and includes well differentiated (FIGO grade 1) with easily recognizable glandular patterns and <5% of solid growth; moderately differentiated (FIGO grade 2) showing well-formed glands mixed with solid sheets of malignant cells and <50% of solid growth; or poorly differentiated (FIGO grade 3) characterized

by solid sheets of cells (>50% of solid growth) with barely recognizable glands and a greater degree of nuclear atypia and mitotic activity.

There was one case each of adeno-squamous, papillary serous adenocarcinoma and squamous cell carcinoma of cervix and endometrium. The adeno-squamous carcinoma showed proliferation of glandular epithelium composed of malignant columnar epithelial cells with large, hyperchromatic nuclei intermixed with malignant squamous epithelium. The papillary serous adenocarcinoma, comprised of papillary growth pattern with cells showing marked cytologic atypia including high nuclear-to-cytoplasmic ratio, atypical mitotic figures, heterochromasia, and prominent nucleoli. Malignancies were found in 0.3% cases in the premenopausal group whereas it was 27.3%, almost 91 times higher, in postmenopausal group and this was statistically significant. (p value 0.001).

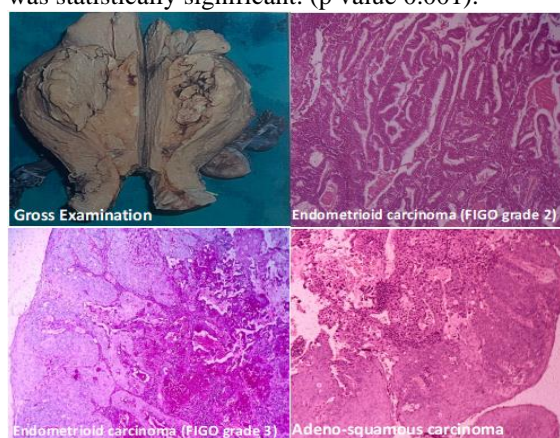


Table 1: Incidence of endometrial carcinoma according to various age groups

Endometrial Carcinoma	N	%	31-40	41-50	51-60	61-70	71-80	81-90
FIGO grade 1 (Well Differentiated Endometrioid carcinoma)	1	5.9		1				
FIGO grade 2 (Moderately Differentiated Endometrioid Ca)	10	58.8		2	5	1	1	1
FIGO grade 3 (Poorly Differentiated Endometrioid Carcinoma)	3	17.6	1		1		1	
Papillary serous adenocarcinoma	1	5.9				1		
Adeno-squamous Carcinoma	1	5.9					1	
Squamous cell Carcinoma	1	5.9						
Total	17		1	3	6	3	3	1
Percentage			5.8	17.7	35.3	17.7	17.7	5.8

Table 2: Comparison of incidence of endometrial carcinoma

Study	Total cases	Cases with Endometrial Carcinoma	% of cases with endometrial Carcinoma
Verbakel JY (2022)	2417	155	6
ME Pennant (2017)	15772	207	1.31
Bhatta et al (2012)	122	7	5.7
Khare et al (2012)	187	5	2.6
Present study	719	17	2.3

Table 3: Frequency of different types of cancer

STUDY	Endometrioid Ca	Papillary Ca	Mucinous Ca	Adeno squamous	Squamous
Bharaswadkar et al	13	02	01	-	-
Olatunde et al	34	8	1	-	-
Present study	14	1	-	1	1

Table 4: Age groups of patients with endometrial carcinomas.

	Below 40	41-50	51-60	61-70	Above 70	Total
Bharaswadkar et al	1	2	4	6	3	16
Olatunde et al	5	6	11	11	11	44
Present study	1	3	6	3	4	17

DISCUSSION

AUB exhibits varied presentations and different causes leading to a number of social and physical morbidity, therefore arising the need of appropriate evaluation and management.^[7,8] Endometrial evaluation is done to detect the hormonal effect on endometrium and also to diagnose premalignant and malignant conditions.

This study highlights the association of endometrial carcinoma with AUB. In the present study Endometrial carcinoma was seen in 2.3% of the cases presenting with AUB. Other studies also found similar findings ranging from 1.8% to 6% [Table 2]. Out of 17 cases, 14/17 (82.3%) had endometrioid carcinoma and 3/17 (17.7%) had non-endometrioid type.

Among non- endometrioid type, one case each of adeno-squamous, papillary serous adenocarcinoma and squamous cell carcinoma of cervix and endometrium were seen which was in concordance with the study done by Bharaswadkar G.^[9] where the most frequent type of endometrial carcinoma was Endometrioid carcinoma 81.2% followed by Papillary carcinoma representing 12.5% and Mucinous type 6.25% [Table 3].

The age of the patients diagnosed with endometrial carcinoma in the present study ranged from 40-85 years. Majority of the cases were seen among the postmenopausal age group. The peak incidence is seen among the age group of 60 and above representing 41.2% (7/17) of all cases, 35.3% (6/17) cases in 51-60 years of age group followed by 17.7% (3/17) cases in 41- 50 years age group and least 5.8% (1/17) in below 40 years of age. The same age group was found to be affected the most in studies by Bharaswadkar G. and Vijayaraghavan A et al.^[10]

CONCLUSION

AUB is the most frequent presenting complaint among the gynaecological patients of various age groups. Endometrial cause of AUB is an age related

pathology. Histopathological examination of endometrium in these patients show a wide spectrum of changes ranging from normal endometrium, to hyperplasia, to malignancy.

Hence, histopathological examination is very important and plays a critical role in early diagnosis of the various pathologies¹⁰. Therefore endometrial biopsy should be done in all patients from peri to post-menopausal age group with AUB and to reach a specific diagnosis which would help the physician to plan the treatment for successful management.

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