



ELUCIDATING THE HISTOPATHOLOGICAL SPECTRUM OF ENDOMETRIAL LESIONS- BENIGN TO MALIGNANT

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ABSTRACT Endometrium is the mucosal layer lining the uterine cavity composed of endometrial glands and specialised stroma. It undergoes hormonally driven changes through out the menstrual cycle. Endometrial carcinoma is the most common invasive cancer of female genital tract[1,2]. Endometrial carcinoma occurs in 8 per 10,000 women globally and is the tenth most frequent reason for cancer deaths[3]. In India it is seen in 4.3 per 100000 women. Endometrial biopsy is currently preferred alternative to dilatation and curettage and is the initial approach to patients with suspected endometrial hyperplasia or carcinoma. Histopathological examination plays a pivotal role in the management of endometrial lesions. **Aim:** To Analyse the spectrum of lesions in endometrial specimens presenting to tertiary care hospital. **Setting And Design:** This was a retrospective study done in the Department of Pathology, Kurnool Medical College, Kurnool. **Materials And Methods:** Study period was for 2 years (January 2022 to December 2023) . Study includes endometrial biopsies, D&C Specimens, Hysterectomy specimens. Grossing was done, processed; Haematoxylin and Eosin stain was done. Reporting was done by light microscopy. Data was collected and entered in MS Excel sheet. **Results:** A total of 453 endometrial samples were received, among which 119 (26.2%) are endometrial lesions, 112 (94.9%) are non-neoplastic and 7 (5.08%) are neoplastic. Most common age group for non-neoplastic lesions is 44-52 years and most common age group for neoplastic lesions is 55-65 years. Endometrial Hyperplasia with out atypia is the most common non-neoplastic lesion accounting for 64 cases and endometrioid adenocarcinoma is the most common neoplastic lesion accounting for 4 cases. **Conclusion:** Non-neoplastic lesions are more common out of all endometrial lesions. Among neoplastic lesions, endometrioid adenocarcinoma is more common. Histopathological examination plays a pivotal role in the diagnosis and management of endometrial lesions.

KEYWORDS : Histopathology, Endometrium, Non-neoplastic lesions, Neoplastic lesions

INTRODUCTION

Endometrium is the mucosal layer lining the uterine cavity composed of endometrial glands and specialised stroma. It undergoes hormonally driven changes through out the menstrual cycle. During active reproductive life, the endometrium is in a dynamic state of proliferation, differentiation, and shedding. This cycle is exquisitely controlled by the rise and fall of pituitary and ovarian hormones. Dating of endometrium by its histologic appearance is used clinically to assess hormonal status, document ovulation, determine cause abnormal bleeding, infertility. Endometrial carcinoma is the most common invasive cancer of female genital tract[1]. Endometrial carcinoma occurs in 8 per 10000 women globally and is the tenth most frequent reason for cancer deaths[2,3]. In India it is seen in 4.3 per 100000 women. Endometrial biopsy is a currently preferred alternative to dilatation and curettage and it is the initial approach to patients with suspected endometrial hyperplasia or carcinoma[7]. Histopathological examination plays a pivotal role in the management of endometrial lesions[17].

AIMS AND OBJECTIVES

Aim was to analyse the spectrum of lesions in endometrial specimens presenting to tertiary care centre.

Objective was to collect data on histopathological lesions of endometrial specimens in a tertiary care centre. To evaluate the data to determine histopathological lesions in endometrium.

MATERIALS AND METHODS

Study Design

Retrospective study conducted in a tertiary care centre over 2 years (january 2022 to december 2023).

Table -1

Sample size:	453 speciens
Inclusion criteria:	Endometrial lesions
Exclusion criteria:	Gestational trophoblastic disease and myometrial lesions Inadequate biopsy samples Cases that doesn't contain adequate data for the study

OBSERVATION AND RESULTS :

Table -2 Age Wise Distribution Of Endometrial Lesions

Age in years	No of lesions	percentage
44 - 52	112	94.11%
55 - 65	7	5.88%
Total	119	

Age wise distribution of Endometrial lesions - Non neoplastic lesions are more common in 44-52 years comprising of 112 (94.1%) cases, Neoplastic lesions are more common in 55-65 years comprising of 7(5.88%) cases.

Table -3 Distribution Of Various Surgical Specimens Received

Types of specimens	No of specimen	percentage
Endometrial biopsies	247	54.5%
Total abdominal hysterectomy	160	35.3%
Lower segment caesarean section with hysterectomy	8	1.76%
Dilatation and curettage	15	3.3%
Total vaginal hysterectomy	20	4.4%
Subtotal hysterectomy	3	0.66%

Most common type of specimen received was endometrial biopsies (54.5%) followed by abdominal hysterectomy (35.3%), Total vaginal hysterectomy (4.4%), dilatation and curettage (3.3%), lower segment caesarean section with hysterectomy (1.76%) and the lowest being sub total hysterectomy (0.66%).

Table -4 Distribution Of Various Endometrial Lesions

Types of lesions	No of lesions	percentage
Non-neoplastic	112	94.1%
Neoplastic	7	5.9%
Total	119	

Among the total endometrial lesions non neoplastic lesions are common with (94.1%) and neoplastic with (5.9%).

Table -5 Histopathological Diagnosis Of Non-neoplastic Lesions

Types of lesions	No of lesions	percentage
Endometrial hyperplasia with out atypia	64	57.14%
Endometrial polyp	16	14.2%
Florid type of endometrial hyperplasia	1	0.89%
Adenomyosis	10	8.92%
Endometrial hyperplasia with hobnail change	1	0.89%

Disorderly proliferative endometrium	5	4.46%
Pill induced endometrium	6	5.37%
Tuberculous endometrium	1	0.89%
Endometritis	3	2.67%
Endometriosis	5	4.46%

Histopathology of non neoplastic lesions showed highest lesions of endometrial hyperplasia without atypia, 64 cases (57.14%) followed by endometrial polyp 16 cases (14.2%), disorderly proliferative endometrium 10 cases(8.92%) pill induced endometrium 6 cases (5.37%) adenomyosis 5 cases (4.46%), endometritis 3 cases (2.67%), and least being endometrial hyperplasia, with hobnail change 1 case (0.89%) and T B endometrium 1 case (0.89%)



Figure.1 Gross image of endometrial hyperplasia

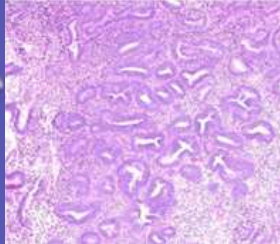


Figure.2 High power view (40x)- increase in number of endometrial glands with out atypia



Figure.3 Gross image of endometrial polyp

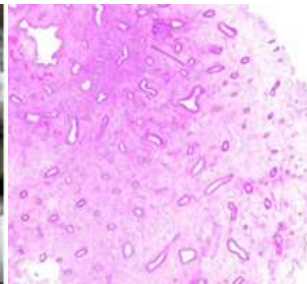


Figure.4 High power view (40x) - low cuboidal epithelium with dilated endometrial glands and loose edematous stroma.

Table - 6 Histopathological Diagnosis Of Neoplastic Lesions

Histological diagnosis	No of lesions	Percentage
Endometrioid adenocarcinoma	4	57.14%
Endometrial stromal sarcoma	1	14.28%
Undifferentiated adenocarcinoma	1	14.28%
Adenosquamous carcinoma	1	14.28%
Total	7	

In neoplastic lesions the endometrioid adenocarcinoma 4 cases (57.14%) is the more common followed by endometrioid stromal sarcoma, adenosquamous carcinoma, undifferentiated adenocarcinoma each 1 case (14.28%)



Figure.5 Gross image of endometrial stromal sarcoma

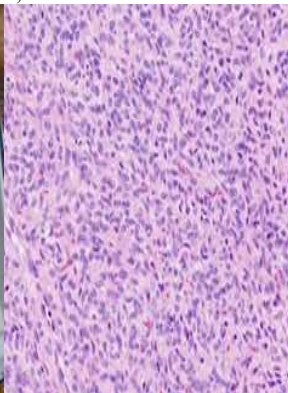


Figure.6 High power view (40x) -endometrial stromal sarcoma showing spindle to ovoid cells with hyperchromatic nucleus.

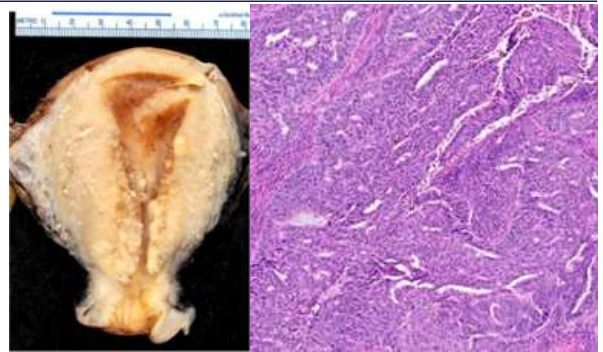


Figure.7 Gross image of endometrioid adenocarcinoma

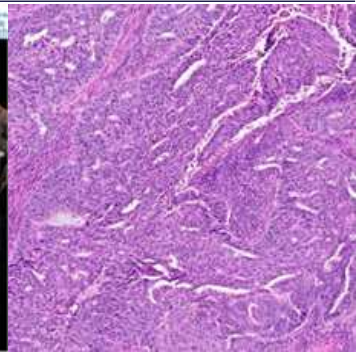


Figure.8 High power view (40x) - solid sheets closely packed endometrial glands with back to back arrangement.

DISCUSSION

The present study comprises histopathological study of 453 endometrial cases, out of which 119 (26.2%) are endometrial lesions (neoplastic and non-neoplastic). The study was done in department of pathology, Kurnool medical college, Kurnool for a period of 2 years. Out of 453 endometrial lesions, 119 (26.2%) are organic lesions, remaining are the functional ones. Similar observation was found by Vaidya S et al[21]. Present study states that non-neoplastic lesions are most common. Most common clinical presentation was post menopausal bleeding, similar observation was found in a study by Karthikeyan et al[8]., other features include pain in abdomen and mass coming out of vagina.

Out of 453 endometrial cases, endometrial hyperplasia with out atypia is most common comprising 64 cases (57.14%). Similar observation was found in other studies like Abbas et al.[22] Pessosa et al[20] & Seda et al., This is followed by endometrial polyp comprising of 16 cases (14.2%), similar observation was found in the study by Karthikeyan et al[8]. This is followed by adenomyosis seen in 10 cases (8.92%), similar observation was found in Panchal S et al.,[23]. In the present study of 452 cases, there was 1 case (0.89%) of tuberculous endometritis, similar observation was found in studies by Bodal et al[12]., and Gowari et al[21]., Out of 453 cases, 7 cases (5.9%) are endometrial malignancies, similar observation was found in study by Huma et al[16]., In present study, most common type of endometrial malignancy was endometrioid adenocarcinoma comprising of 3 (57.4%) out of 7 (5.9%) neoplastic lesions, which was comparable with studies done by Himel B et al[6]., and Deodhar et al[13]., Endometrioid adenocarcinoma is most common neoplastic lesion and is common in all studies

Table - 7 Comparison Of Present Study With Other Studies

S. no	studies	Most common non-neoplastic lesion	Most common neoplastic lesion
1	Karthikeyan et al[8]	Endometrial polyp	Endometrioid adenocarcinoma
2	Pessosa et al[19]	Adenomyosis	Endometrioid adenocarcinoma
3	Abbas et al[22]	Endometrial hyperplasia with out atypia	Endometrioid adenocarcinoma
4	Panchal S et al[23]	Adenomyosis	Endometrioid Adenocarcinoma
5	Present study	Endometrial hyperplasia with out atypia	Endometrioid adenocarcinoma

CONCLUSION

In present study, non-neoplastic lesions were more common out of all endometrial lesions. Among non-neoplastic lesions, endometrial hyperplasia with out atypia is the most common. Among neoplastic lesions, endometrioid type of adenocarcinoma is most common. Histopathology is important and plays a pivotal role in ensuring diagnosis and deciding management, particularly for malignant diseases[17]. In this molecular era of diagnosis, present study helps in ensuring diagnosis of endometrial lesions in rural based health care institutes, where adequate facilities are not available.

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