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Research Article

HISTOPATHOLOGICAL STUDY OF LESIONS IN UTERINE CORPUS

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A R T I C L E I N F O

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A B S T R A C T

Introduction: The uterus is a specialised fibromuscular organ composed of the upper corpus which is muscular and the lower cervix. Since ages various diseases and deformities have affected the female reproductive system.
Aims and Objectives: To study the gross and microscopic appearances of different uterine corpus lesions.To find the occurrence of various neoplastic and non-neoplastic lesions.To analyse the occurrence of uterine corpus lesions with age predilection.To access the types of hysterectomies done for various uterine corpus pathologies.
Materials and methods: The specimens received through resection of uterus reported in MGMCRI in a period starting from November 2015 to May 2017 were studied.
Results: Majority of the uterine corpus lesions were seen among reproductive age group (76.82%). Total abdominal hysterectomy (57.9%) was the most commonly performed surgery. The occurance of myometrial lesions was higher (59%) compared to the endometrial lesions (41%). Non-neoplastic endometrial lesions constitute about 76.4% of the total endometrial lesions while the neoplastic lesions constitute only 23.52%. The occurance of villoglandular variant of endometrioid carcinoma was higher (35%). Adenomyosis (82.1%) was the most common non-neoplastic myometrial lesion. Leiomyoma was the most common myometrial lesion.
Conclusion: This database from our study may help gynecologists to modify their treatment options.

INTRODUCTION

The uterus is a specialised fibromuscular organ composed of the upper corpus which is muscular and the lower cervix which is fibrous and continues down into the vagina. The uterus arises from the invagination of the paramesonephric duct during the 6th week of foetal development. The fundus of the uterus is the part above the attachment of the fallopian tube.The corpus is composed of the two lateral extensions of fundus associated with the intramural portion of fallopian tube. The isthmus is narrow area at the junction of the corpus and the cervix. It is a pear shaped hollow organ which weighs around 140-180 grams. The shape, size and weight of the uterus are varied depending on the parity status and estrogen level. The corpus consists of two layers namely endometrium and myometrium. The uterine cavity resides within the corpus and is enclosed by a thick muscular wall. The uterine cavity is lined by the endometrium and consists of 3 layers: the pars basalis, the zonaspongiosa, and the superficial zonacompacta.The endometrium vary greatly depending on the phase of the menstrual cycle.

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Endometrial proliferation occurs under the influence of estrogen and maturation of endometrium is controlled by progesterone.1

The usual position of uterus in a nulligravid women is slightly bent anteriorly, and as a whole it is angled towards the symphisis and in ante-version against the bladder. In a small proportion of women, however the organ has a posterior inclination or is retroflexed in the direction of sacrum. A subset of disorders were associated with these malpositions previously such as back-ache, dysmenorrhea, dyspareunia, uterine bleeding, and leucorrhea.

Since ages various diseases and deformities have affected the female reproductive system and hence it has been considered one of the most fascinating and oldest medical specialities.

The uterus is continuously stimulated by hormones, undergoes monthly denudation of its endometrial surface mucosa and is put through a variety of abnormalities.2

There can be both malignant and benign neoplasms arising from different sites of the female genital tract. Among them the most common ones are due to imbalances in the endocrine secretions, pregnancy and neoplasm associated complications.3

These neoplasms have their own specific morphologies, sizes and abnormal systemic presentations.

There are both morphological and biological continuum existing among the spectrum of endometrial lesions starting from simple hyperplasia and going up to poorly differentiated carcinomas.

Various diagnostic approaches such as curetting of the endocervical and endometrial canal, hysteroscopy and ultrasound help in interpreting complex uterine abnormalities. The study of these abnormalities has provided numerous insights into the biological behaviour of these neoplasms.

Uterine corpus lesions in reproductive and post-menopausal women will frequently present as menorrhagia/excessive vaginal bleeding, mass per abdomen, and vaginal discharge which is initially managed conservatively by medications. When patients cannot be managed effectively by conservative treatment then gyanecologists and general surgeon's opinion are sought for hysterectomy inorder to prevent excessive bleeding.

Hysterectomy is the ultimate choice of treatment for majority of pathological conditions in uterus and thereby has significant diagnostic as well as therapeutic value.

Prevalence of corpus pathologies differ among different geographical regions within the same nation and moreover most of these uterine pathologies occur in the corpus. This is the reason behind conducting this study in our institution in order to access the pattern of diseases encountered in the uterine corpus and to interpret the histopathological features of various uterine lesions.

AIMS AND OBJECTIVES

Aim

To determine the frequency of various uterine corpus lesions and correlate their histopathological features with clinical findings

Objectives

1. To study the gross and microscopic appearances of different uterine corpus lesions.
2. To find the occurrence of various neoplastic and non-neoplastic lesions of the uterine corpus reported in our tertiary care centre and to classify neoplastic lesions according to the latest WHO classification.
3. To analyse the occurrence of uterine corpus lesions with age predilection.
4. To access the types of hysterectomies done for various uterine corpus pathologies.

METHODOLOGY

This prospective study was conducted at Mahatma Gandhi Medical College and Research Institute (MGMCRI) in Pondicherry, a tertiary care centre. This study was scrutinised and approved by Institutional Human Ethics Committee. The present study analyzed the gross and microscopic appearances of different uterine corpus lesions and found the occurrence of various neoplastic and non-neoplastic lesions of the uterine corpus reported in our tertiary care centre and classified neoplastic lesions according to the latest WHO classification.

The data was collected from November 2015 to May 2017 in the Department of Pathology, MGMCRI. Hysterectomy specimens of three hundred and thirty eight patients were analysed during this period.

Type of Study

Cross sectional study.

Sample Size

Three hundred and thirty eight.

Inclusion Criteria

All Hysterectomy specimens received in the pathology department of Mahatma Gandhi Medical College and Research Institute.

Exclusion Criteria

Lesions of the uterine cervix.
Lesions of the uterine adenexa.
Lesions of the placenta.

Study Paramaters

1. Age of the patient
2. Clinical data and diagnosis
3. Gross description of the specimen
4. Histopathological diagnosis.

Brief procedure

Hysterectomy specimens from November 2015 to May 2017, for a period of one and a half years were studied. Specimens were received in 10% formalin and are fixed overnight and subjected to gross examination. Gross appearance of the lesions were noted. Bits were taken from relevant areas. The tissue bits were subjected to routine paraffin processing. Three to five micro-metres thin multiple sections were taken and stained with haematoxylin and eosin stains. Special stains were added as required. Histopathology of the lesions were studied along with variables like age, clinical presentation and the tumors were classified according to the latest WHO classification. The study findings were analysed and compared with the findings of other authors.

Data Collection

All data were entered into a Data Collection Proforma Sheet (Appendix 1) and were also entered in Excel (MS Excel 2011). The Sheet had a visual map for marking and had details of the patient's age, type of hysterectomy performed, clinical diagnosis and also contained the gross and microscopic appearance of both endometrium and myometrium separately. The data compiled were analysed with the above mentioned parameters and classified into neoplastic and non-neoplastic lesions according to the latest WHO classification.

Statistical Methods

Percentages were used as a descriptive statistics to explain the distribution. Pie diagrams and bar diagrams were used for simple data interpretation.

RESULTS

Observations

The present study "histopathological study of lesions in uterine corpus" was done in the department of pathology, Mahatma

Gandhi Medical College and Research Institute from November 2015 to May 2017. A total of 338 hysterectomy specimens were studied during this period and the results were analyzed statistically.

DISCUSSION

Uterus being a vital reproductive organ is subjected to many benign and malignant disorders. Wide treatment options are available which includes medical and conservative surgical treatment, but hysterectomy still remains the commonest gynecological procedure performed to treat such disorders. Worldwide women diagnosed as having gynecologic and obstetric lesions need hysterectomy as a therapy. This may also include excision of fallopian tube and ovary which depends on the clinical diagnosis, age and parity of the woman.[4]

The uterus is on continuous stimulation by hormones, monthly denudation of endometrial mucosa and transient inhabitation by fetuses. Thereby it is subjected to various disorders, the most common disorders are due to hormonal imbalances of endometrium. Uterine corpus lesions causing abnormal uterine bleeding account for most out-patient visits to gynecologic department.

Hysterectomy is the surgical procedure to remove uterus. It is performed as a treatment option to a variety of gynecological disorders. Mostly, hysterectomy is done as an elective procedure. Uterine fibroids, endometriosis, uterine prolapse, uterine carcinoma are some of the common indications for hysterectomy.[5]

A total hysterectomy is the procedure for the removal of both uterus & cervix. Hysterectomy with bilateral salpingo-oophorectomy is the procedure to remove uterus along with bilateral adnexa. Radical hysterectomy is an extensive procedure for uterine or cervical cancer. It includes removal of uterus, cervix, upper vagina, surrounding soft tissues and pelvic lymph nodes.

Histopathological diagnosis is the gold standard for the accurate diagnosis of uterine corpus lesions, which has a great impact on the treatment of the patient. Endometrial assessment is performed to diagnose tumors or pre-malignant lesions and also to evaluate the hormonal problems of the endometrium. It is very important to evaluate the endometrial histopathology in women who have changes in their bleeding pattern even after a course of medical treatment for atleast three months.[6]

Histopathological examination of hysterectomy specimens has both diagnostic and therapeutic significance. Prevalence of uterine pathological lesions varies from one nation to the other and from region to region within the same nation. Hence, this study was conducted with a view to get an insight into the patterns of various uterine corpus lesions in hysterectomy specimens in this institution. Our study was successful in evaluating the histopathological features of varied lesions of uterine corpus, their profile and distribution of different lesions in relation to age and mode of clinical presentation.

Comparison of age-wise distribution of corpus pathologies among various studies

Age is an important factor which governs the histopathological progression. Age is directly associated with aggressiveness of uterine corpus lesions because more progressive lesions commonly occured in peri and postmenopausal age-group as compared to reproductive age-group. In our study 76.82% of uterine corpus lesions were observed in the reproductive age-group, 18.9% lesions in menopausal age-group, 3.84% lesions in post menopausal age-group and 2.66% lesions in pre-pubertal age-group (Table 1). In a documentation of 1000 consecutive operations by Watts *et al*, most of the cases i.e; 45.2% were distributed in age-group of 41- 50 years.[7] Various other studies done by Rather GR *et al*,[8] Ramchandran T *et al*[9] and Ajmera *et al*[10] showed similar findings.

Studies showing the predominant age-group in which the uterine corpus pathologies were more common

S. No	Studies	Predominant age-group with uterine corpus pathologies	Percentage	Total number of cases involved in the study
1	Present study	31-45 years	76.82%	338
2	Watts *et al*	41-50 years	45.2%	1000
3	Rather GR *et al*	41-50 years	34.6%	697
4	Ramachandran T *et al*	31-45 years	40.5%	234
5	Ajmera *et al*	41-50 years	68%	373

Comparison of Mismatch cases with uterine corpus pathologies among various studies

Out of 338 cases, there were 76 mismatch cases in which the clinical diagnosis were not correlated with histopathological diagnosis (Figure 2). There were 26 cases which were clinically diagnosed as fibroids but were grossly and microscopically adenomyosis. Fourteen clinically diagnosed fibroid cases were found to be endometrial polyps after histopathological examination. Ten cases presented with mass per abdomen and a clinical diagnosis of leiomyosarcoma was given. Gross examination of those 10 specimens showed bulky uterus and cut-section of uterus showed features of leiomyoma with secondary degenerations such as hyaline and myxoid. Seven cases were diagnosed clinically as malignant stromal tumor but histopathological examination revealed benign stromal nodule. Similarly five cases were diagnosed to be uterine sarcoma but histopathological examination showed adenomyosis. All the above discrepant cases proved the significance and need of thorough gross and histopathological examination before arriving at final diagnosis which helps in further treatment management of the patient. A similar study conducted by Chandralekha J *et al* noted 18 mismatch cases among 544 total cases (3.30%).[11]

Comparision of percentage of mismatched cases between present study and a similar study

S.No	Studies	Total Cases	Mismatched cases	Percentage
1	Present study	338	76	22.4%
2	Chandralekha J *et al*	544	18	3.30%

Comparison of types of hysterectomies done among various studies

Out of 338 hysterectomy specimens, TAH was done in 57.9% patients, VH in 28.9% patients, TAH with BSO in 10.65% patients, VH with colporrhaphy in 1.18% patients, TAH with left salphingo-oopherectomy in 0.88% patients and modified radical hysterectomy in 0.29% patients (Table 2). Similar study done by Jha R *et al* showed that among 221 hysterectomy specimens received, 62.9% of patient's specimens were total abdominal hysterectomy and 37.1% were vaginal hysterectomy.[12] Another study done by Ajmera *et*

al observed that abdominal approach was preferred in 54.4% cases and vaginal hysterectomy in 38.9% cases.

Studies showing the percentage of surgeries performed for uterine corpus lesions

S.No	Type of surgery	Percentage (%) cases in present study	Percentage(%) cases in Ajmera et al study	Percentage(%) cases in Jha R et al study
1	Total abdominal hysterectomy	57.9	54.4	62.9
2	Total abdominal hysterectomy with Bilateral salphingo oopherectomy	10.65	6.7	-
3	Total abdominal hysterectomy with unilateral salphingo oopherectomy	0.88	-	-
4	Vaginal hysterectomy	28.99	38.9	37.1
5	Vaginal hysterectomy with colporraphy	1.18	-	-
6	Modified radical hysterectomy	0.29	-	-

Analysis of endometrial phases in the present study:

Histopathological examination of the endometrium in our study showed proliferative phase in 50% specimens, secretory phase in 16.87% specimens, disordered proliferaive phase or pill endometrium in 8.59% and atrophic endometrium in 16.87% (Table 3). Hormonal imbalance was most commonly observed in peri-menopausal age-group patients which confirmed the fact that transition from ovulatory cycle to anovulation occurs in peri-menopausal age-group.

Comparison of endometritis among various studies:

Occurance of endometritis in our study was 0.63% (Table 3). Muzaffar *et al* noted chronic endometritisin 13%[13] whereas Parveen *et al* noted in 37%.[14] This variation may be due to socio-economic status, personal hygiene or surgical exposure. Moreover chronic endometritis may also be due to underlying uterine pathology like retained products of conception etc.

Reports of occurance of Endometritis in various studies

S.No:	Studies	Endometritis in percentage (%)
1	Present study	0.63%
2	Muzaffar *et al*	13%
3	Parveen *et al*	37%

Comparison of endometrial polyps among various studies

Occurance of polyp in our study was 7.04% (Table 3) which is the next common lesion after hormonal imbalance patterns and it is not a major risk factor for the origin of endometrial carcinoma since none of the polyps showed atypical changes.[15] Azim *et al* noted an increased frequency of polyps as the age advances with 5%, 8% and 11% occurance in reproductive, peri-menopausal and post menopausal age-groups respectively.[16]

Comparison of of neoplastic endometrial lesions among various studies

The occurance of neoplastic endometrial lesions were 23.53% in our study (Figure 3). Endometrioid carcinoma with squamous differentiation in 6% of cases, villoglandular endometrioid carcinoma in 35% cases, secretory endometrioid carcinoma in 3% patients, clear cell carcinoma in 6% and serous carcinoma in 3% were observed in our study (Figure 4). These finding were similar to other studies in which frequency of endometrial carcinomas were found to be low.[17] Chinese Feng Y noted higher incidence of endometrial carcinomas of about 50% in postmenopausal bleeding.[18]

Comparison of endometrial hyperplasia among various other studies

Hyperplasia was found in 28% specimens in our study (Figure 4).

Behnamfar *et al* noted cystic and adenomatous hyperplasia in addition to other patterns with an incidence of 9% and 10.9% respectively[19] while Dexus *et al*[20] and Manhas K *et al*[21] observed higher frequency of endometrial hyperplasia with 21% and 22.6% respectively.

Reports of occurance of hyperplasia in various studies

S.No:	Studies	Year	Hyperplasia Percentage (%)
1	Present study	2017	28%
2	Behnamfar *et al*	2004	19.9%
3	Dexus *et al*	1981	21%
4	Manhas K *et al*	2004	22.66%

Comparison of endometrial stromal nodule among various studies

Endometrial stromal nodule was seen in 13% (Figure 4). On gross examination, the endometrial cavity was filled with polypoidal masses and on cut-section was yellowish while the histopathological examination ruled out endometrial carcinoma and proved it to be endometrial stromal nodule. Endometrial stromal sarcoma was reported in 6% cases in our study (Figure 4).

Comparison of endometrial carcinoma among various studies

The lower occurance of endometrial carcinoma in our population may be associated with early child-bearing and multiparity. The proliferative activity markedly decreases during pregnancy which explains the lower incidence of hyperplastic and neoplastic uterine corpus lesions in our population.

Reports of occurance of endometrial carcinoma in various studies

S.No.	Studies	Occurance of endometrial Carcinoma	Year
1	Present study	9.4%	2017
2	Mariam Abid *et al*	2%	2014
3	Parveen S *et al*	1%	2014
4	Dangal G *et al*	17.6%	2003

Comparison of leiomyoma among various studies

Leiomyoma is the most common neoplastic myometrial lesion in our study (Table 4). These tumors can occur intramurally, subserosally or submucosally and will produce symptoms referable to their size and location. Occurance of intramural fibroid was 61.76%, subserosal fibroid was 23.52% and submucousal fibroid was 11.76%. Most of the other studies done on the histopathological study of hysterecomy specimens till date revealed that the uterine fibroid was the most common

pathology that occured in the uterus. Studies done by Watts WF *et al*, Abdullah LS[22] and Ranabhat SK *et al*[23] noted the distribution of fibroids as 41.5%, 34.6%, and 30.3% respectively.

Reports of occurance of leiomyoma in various studies

S.No.	Studies	Occurance of leiomyoma in percentage (%)
1	Present study	28.35%
2	Watts WF *et al*	41.5%
3	Abdullah LS *et al*	34.6%
4	Ranabhat SK *et al*	30.3%

Adenomyosis was the most common non-neoplastic myometrial lesion in our study which accounted for 82.1% (Figure 6). Adenomyosis is rarely diagnosed in preoperative period. It is still largely under-diagnosed since it has no specific symptoms on its own.[24] It is usually diagnosed by histopathological examination.[25]

Carcinosarcomas are very aggressive biphasic neoplasms composed of both carcinomatous and sarcomatous components. In this study, malignant tumors are uncommon with a low incidence compared to non-malignant tumors. Leiomyosarcoma was noted in 2.94% specimens (Table 4). In a similar study conducted by Rather *et al* only five cases of malignant tumors were encountered in the uterus out of 698 cases. Other studies done by Bukhari and Sadiq also reported similar low incidence of uterine malignancies.[26]

Our study provides an insight into the histopathological patterns of various uterine corpus lesions in hysterectomy specimens. Though the histopathological analysis correlates with the clinical diagnosis in most of the cases, quite a few uterine lesions are also encountered as pure incidental findings. Therefore, it is mandatory that every hysterectomy specimen should have a detailed histopathological examination even if it appears normal on gross examination, to confirm various uterine pathological lesions and for better post-operative management of the patients. This database from our study may help gynecologists to modify their treatment options. Moreover, based on common uterine corpus lesions in our population, health literacy, screening programmes, etc., can be constructed effectively.

Limitations of Present Study

1. Present study has few limitations. Since majority of the patients in this region are of low economic status, they did not come back for follow-up in spite of having some uterine corpus pathologies which needed surgical intervention and hence hysterectomy was not done for those patients.
2. A subset of population who were advised for surgery avoided hysterectomy from being done by giving the reason of superstitious and religious beliefs.
3. Immunohistochemistry if done would have added some advantage in diagnosing and typing some tumors like papillary serous tumors and high-grade adenosquamous carcinoma.

Acknowledgement

We sincerely thank the Dean and staffs of Mahatma Gandhi Medical College and Research Institute for their persistent support and effect.

Age distribution

Table 1 Age-Wise Distribution of Uterine Corpus Lesions

S.No.	Age-group	Total number of Cases	Percentage (%)
1	Pre-pubertal	9	2.66
2	Reproductive	252	76.82
4	Menopausal	64	18.9
5	Post-menopausal	13	3.84

- Majority of the uterine corpus lesions in our study were seen among reproductive age group cases (76.82%) followed by menopausal age group (18.9%).
- The least number of cases were seen in pre-pubertal age group (2.66%).

Frequency of different types of hysterectomies

Table 2 Types of Hysterectomies performed for uterine corpus pathologies

S.No	Type of surgery	No. of patients	Percentage (%)
1	Total abdominal hysterectomy	196	57.9
2	Total abdominal hysterectomy with bilateral salphingo oopherectomy	36	10.65
3	Total abdominal hysterectomy with unilateral salphingo oopherectomy	3	0.88
4	Vaginal hysterectomy	98	28.99
5	Vaginal hysterectomy with colporraphy	4	1.18
6	Modified radical hysterectomy	1	0.29

- Total abdominal hysterectomy (57.9%) was the most commonly performed surgery for uterine corpus lesions followed in succession by vaginal hysterectomy (28.99%).
- Modified radical hysterectomy was rarely performed and constituted only 1 case (0.29%) in this study.

Endometrial Vs myometrial lesions

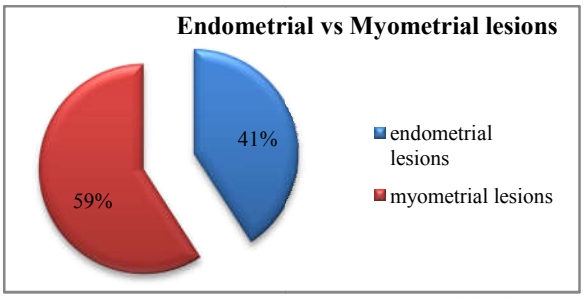

Figure 1 Occurance of Endometrial Vs myometrial lesions

Among 338 hysterectomy specimens in our study, the occurance of myometrial lesions was higher (59%) compared to the endometrial lesions (41%).

Clinicopathological correlation

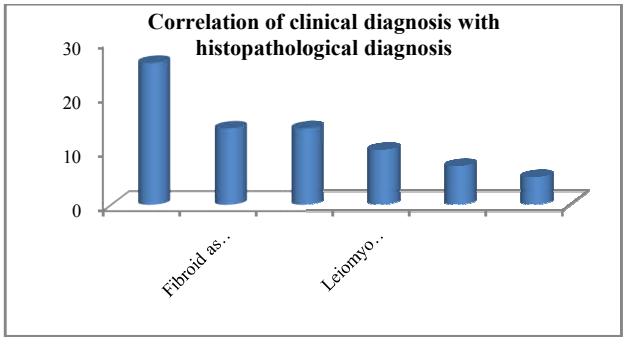

Figure 2 Correlation of clinical diagnosis with histopathological diagnosis

- In our study, 26 cases which were clinically diagnosed as fibroid were found to be adenomyosis on histopathological diagnosis. Similarly various clinical interpretations made by gynecologists and general surgeons mismatched with histopathological diagnosis which helped them to reconsider their diagnosis and treatment plans.
- The other clinically misdiagnosed uterine corpus lesions among the 338 cases in our study were fibroid as endometrial polyp (14 cases), endometrial hyperplasia as endometrial carcinoma (14 cases), leiomyoma with secondary changes as Leiomyosarcoma (10 cases), stromal nodule as stromal tumor (7 cases) and adenomyosis as uterine sarcoma (5 cases).

Non-neoplastic vs neoplastic endometrial lesions

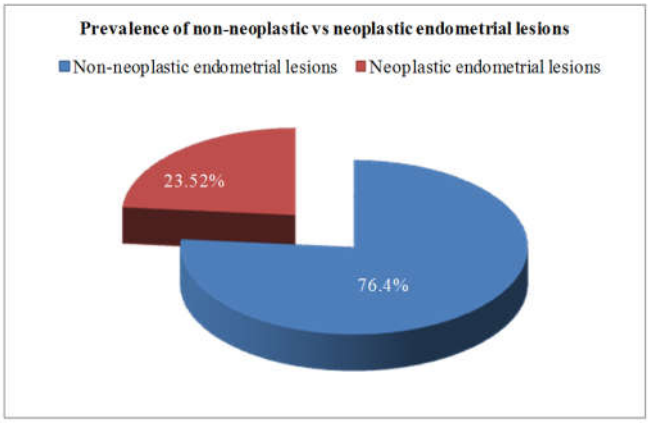

Figure 3 Occurance of non-neoplastic vs neoplastic endometrial lesions

Non-neoplastic endometrial lesions constituted about 76.4% of the total endometrial lesions while the neoplastic lesions constituted only 23.52%.

Non-neoplastic endometrial lesions

Table 3 Histopathological diagnosis of non-neoplastic endometrial lesions

S.No:	Histopathological diagnosis of endometrial lesions		Number	Percentage (%)
1	Normal	Proliferative Phase	157	50
2		Secretory Phase	53	16.87
3	Disordered Proliferative Phase/ Pill endometrium		27	8.59
4	Atrophic Endometrium		53	16.87
5	Endometritis		2	0.63
6	Endometrial Polyp		22	7.04

- In our study 50% women were in proliferative phase, 16.87% in secretory phase and 8.59% women had disordered proliferative phase.
- Prevalence of Atrophic endometrium was 16.87% which was most commonly seen in menopausal and post-menopausal women
- Prevalence of endometrial polyp was 7.04% among 338 hysterectomy specimens

Neoplastic endometrial lesions

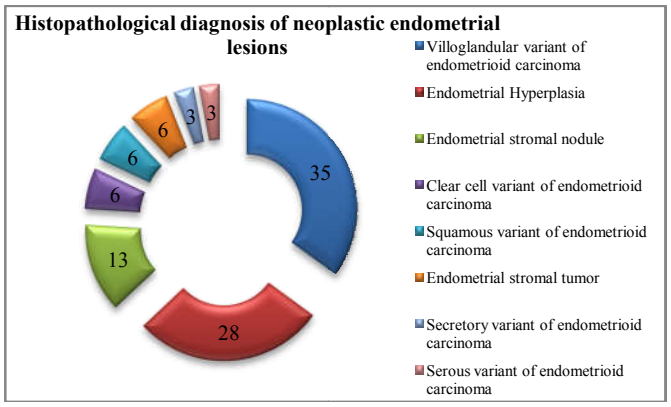

Figure 4 Histopathological diagnosis of neoplastic endometrial lesions

We reported a case of secretory carcinoma of the endometrium in a 45 year old women who presented with irregular vaginal bleeding and the histopathological features were of well differentiated glandular pattern having columnar cells with supra-nuclear vacuolization and clear glycogenated cytoplasm.

Non-neoplastic vs neoplastic myometrial lesions

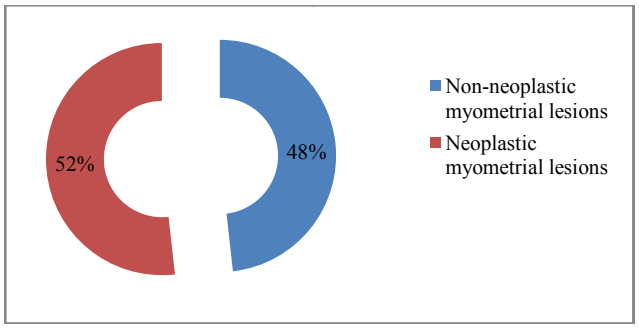

Figure 5 Occurance of Non-neoplastic vs neoplastic myometrial lesions

Neoplastic myometrial lesions constituted about 52% of total myometrial lesions while the non-neoplastic lesions constituted about 48%

Non-neoplastic myometrial lesions

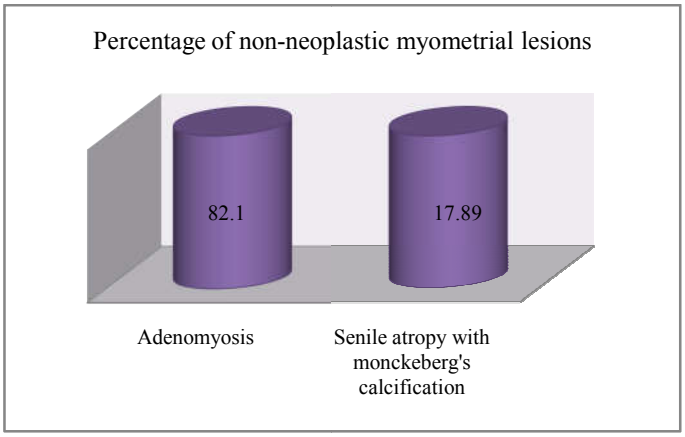

Figure 6 Histopathological diagnosis of non-neoplastic myometrial lesions

Adenomyosis (82.1%) was the most common non-neoplastic myometrial lesion reported in our study.

Neoplastic myometrial lesions

Table 4 Histopathological diagnosis of neoplastic myometrial lesions

S.No:	Histopathological diagnosis of myometrial lesions			Number		Percentage (%)
1	Leiomyoma	Intramural	Hyaline degeneration	63	13	61.76
			Cystic degeneration		1	
			Red degeneration		1	
			Myxoid degeneration		6	
		Subserosal	Hyaline degeneration	24	2	23.52
			Cystic degeneration		5	
			Red degeneration		0	
			Myxoid degeneration		1	
		Submucosal	Hyaline degeneration	12	4	11.76
			Cystic degeneration		1	
			Red degeneration		0	
			Myxoid degeneration		1	
2	Leiomyosarcoma			3		2.94

Leiomyoma was the most common myometrial lesion encountered in our study. Among the leiomyoma, the prevalance of intramural fibroids (61.76%) were higher than the subserosal (23.52%) and submucosal fibroids (11.76%).

We reported a case of leiomyosarcoma in a 51 year old women who had hysterectomy done for fibroid uterus. The gross examination of the specimen showed a polypoid tumor which was invading and projecting into the lumen. Histopathological examination showed hypercellular tumor with spindle shaped cells, large areas of coagulative necrosis and many atypical mitotic figures. Infiltrative border was the most helpful feature for diagnosis of this case.

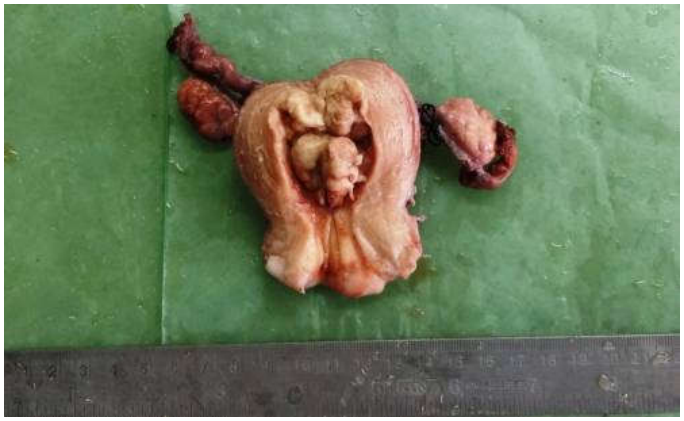

Figure 7 Gross of Endometrioid Adenocarcinoma showing polypoidal mass within endometrial cavity

Figure 8 Gross of Endometrial Stromal Nodule

Figure 9 Gross of Endometrial Stromal Sarcoma showing infiltrative growth.

Figure 10 Gross of Leiomyoma

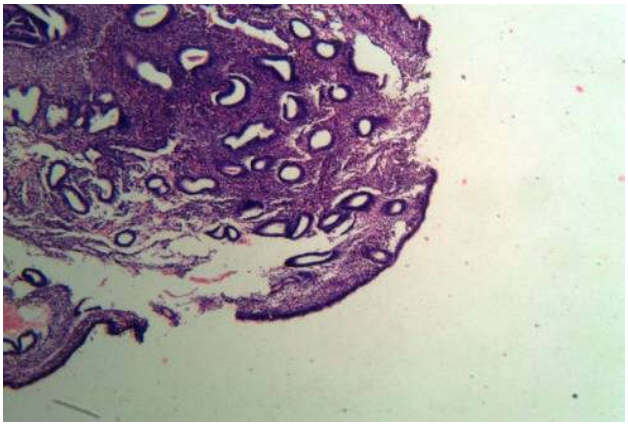

Figure 11 Endometrial polyp (H&E x10)

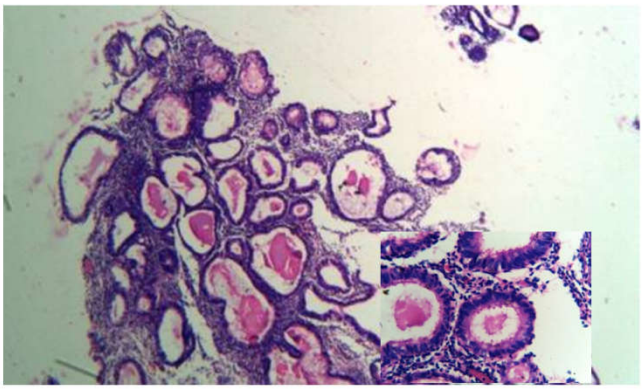

Figure 12 Endometrial hyperplasia without atypia (H&E x10). Inset shows proliferative endometrium with back to back arrangement of glands (H&E x40)

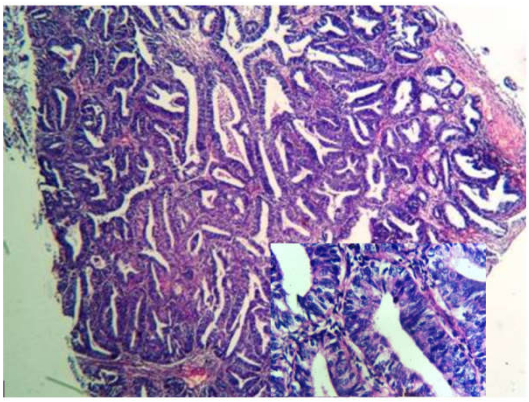

Figure 13 Endometrial hyperplasia with atypia (H&E x10). Inset shows endometrial glands lined by tall columnar cells with atypia (H&E x40)

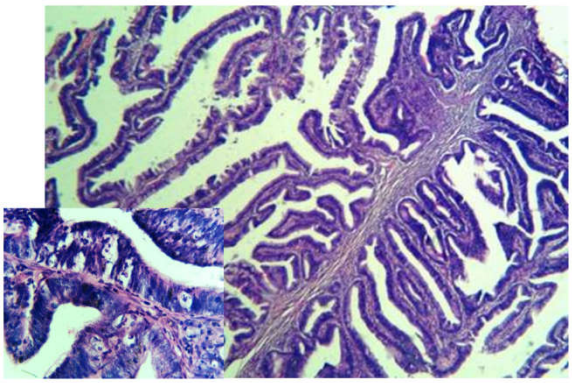

Figure 14 Villoglandular variant of Endometrioid adenocarcinoma (H&E x10). Inset shows tumor lined by stratified pleomorphic columnar cells (H&E x 40)

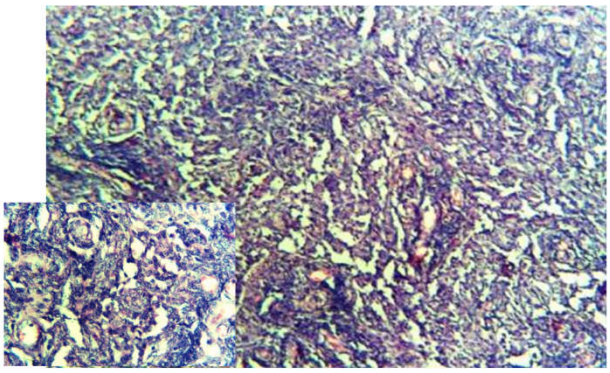

Figure15 Endometrial Stromal nodule (H&E x10). Inset shows sheets of spindled to oval tumor cells with prominent vascularity (H&E x40)

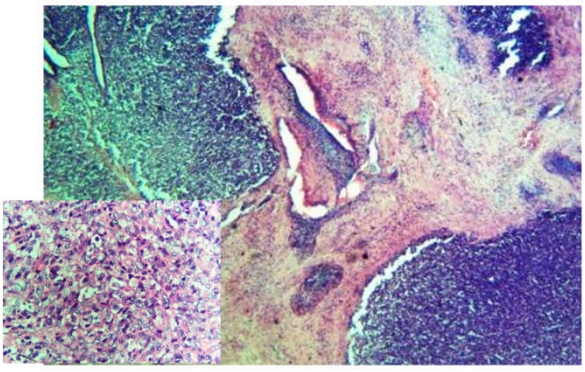

Figure 16 Endometrial Stromal sarcoma (H&E x10). Inset shows spindled to oval pleomorphic tumor cell showing prominent bizarre nucleoli and increased mitotic figures (H&E x40)

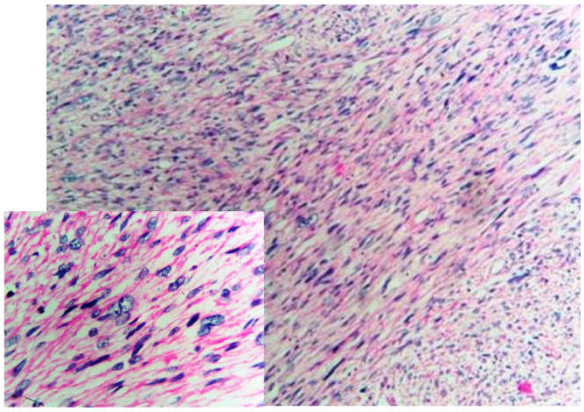

Figure 17 Leiomyomasarcoma (H&E x10). Inset shows spindled to oval pleomorphic tumor cells with many showing prominent nucleoli with atypical mitotic figures (H&E x40)

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