

"A DESCRIPTIVE STUDY OF CLINICO-PATHOLOGICAL CORRELATION IN CASES OF HYSTERECTOMY AT TERTIARY CARE CENTRE"

Obstetrics & Gynaecology

Naziya Parveen Ansari

Senior Resident Obstetric & Gynaecology Department Govt. Medical College Kota Rajasthan

Bharti Saxena

Senior Professor And Unit Head Obstetric & Gynaecology Department Govt. Medical College Kota Rajasthan

ABSTRACT

Introduction: Hysterectomy is the most common gynaecological operation done for variety of indications both benign and malignant. All specimens of hysterectomy need to be evaluated for histopathological correlation because it serves to identify tissue removed, confirm the diagnosis, additional pathological finding like adenomyosis, tuberculosis, malignancy which were not evident clinically and finally provide ethical support to the surgeon in the event of medico-legal suit. Similarly the postoperative treatment may be supplemented in the event of certain diseases like tuberculosis and malignancy. **Materials and Methods:** This prospective study conducted at department of obstetrics and gynaecology J.K. Loan Hospital, Govt. Medical college Kota (Raj.) during January 2020-May 2021. Total 280 cases were studied in this period. The study included all women admitted in gynaecology ward for planned hysterectomy for gynaecologic indications. Hysterectomy specimens were saved in 10% formalin and send to department of pathology. Histopathology reports were analysed and compared with the clinical indications of surgery for correlation. **Results** – Out of 280 cases, Maximum 139 (49.70%) were in the age group of 41-50 years. Majority of patients were admitted with complaint of menstrual abnormality in which Heavy and Irregular menses was the most common. Most common clinical diagnosis was leiomyoma uterus which was diagnosed clinically and by ultra-sonography in 132 (47.15%) cases. The commonest route of hysterectomy was Abdominal in 201 cases (71.80%) and the commonest type of hysterectomy was abdominal hysterectomy with bilateral salpingo-oophorectomy in 115 cases (41.07%). On Histo-pathological examination, the commonest pathology, similar to clinical diagnosis, was found to be leiomyoma in 139 cases (49.65%) followed by Adenomyosis in 59 cases (21.10%). Endometrial polyp in 10 cases and carcinoma of cervix in 08 cases. **Conclusion:** Meticulous preoperative evaluation results in improving diagnostic accuracy, so that clinic-pathological correlation is good. The present study reveals that correlation between clinical (preoperative) diagnosis and histological diagnosis is 90.95%. Histopathological examination revealed different or additional diagnosis in 9.05% cases. Availability of better diagnostic aids like tumor markers, pap's smear, FNAC, Endometrial aspiration cytology, USG, CT scan, MRI have all resulted in improving preoperative Diagnostic accuracy.

KEYWORDS

Hysterectomy, Clinico-pathological correlation, Biopsy, AUB-L

INTRODUCTION-

Hysterectomy is one of the most common major surgical procedure performed after caesarean delivery in women between the age of 20-49 years of age^(1,2). Among the main reasons for hysterectomy in 30-49 years of age are excessive menstrual bleeding or pain (56%), fibroids (20%) and uterine disorders⁽³⁾. Ideally Hysterectomy must be done when all medical treatments available have been tried and been ineffective. But all the conservative treatment modalities are not available to the masses in government hospitals and are costly and not affordable to most of the patients⁽⁴⁾.

Low educational status and poverty often is responsible for women opting one time final treatment option that is hysterectomy. Lack of counselling regarding the side effects of major surgical procedures is also some time responsible for the women to opt for hysterectomy^(5,6).

Today is the era of the uterine conservation and awareness about the alternative treatment modalities has resulted in a few medico legal issues against the gynecologist.

Histopathological examination of the tissues removed in hysterectomy serves to confirm the diagnosis and justify the needs for surgery thus undertaken.

Present study is an effort to evaluate the correlation between clinical diagnosis (Based on history, clinical examination and investigations) and the Histopathological report of the hysterectomy specimen removed.

Methodology-

This Hospital based prospective observational type of study conducted among women who were admitted in Gynaecology department of J.K. Loan Hospital and Medical College Kota from January 2020 to May 2021. This study was approved by ethical committee of our institute (letter NoF.3()-acad/ethical clearance/2020/07). All patients admitted for planned hysterectomy for gynaecological indication were included in this study. Obstetrical hysterectomies were excluded from study.

All patients who participated in study were evaluated for demography, age, parity, education and then clinical assessment done by taking

clinical history, general physical examination, systemic examination with per abdomen and per vaginal examination aided by other ancillary measure such as diagnostic endometrial curettage, pap's smear, cervical biopsy, ultrasonography etc.

Routine preoperative investigations were done. The type of hysterectomies performed were abdominal, vaginal and laparoscopic. All the operated specimens were preserved in 10% formaldehyde and histopathological examination done by pathology department of Government medical college Kota Rajasthan. The biopsy report thus obtained was compared with the preoperative assessment and the correlation between the two was studied.

RESULTS-

During study period we had a total of 280 cases. Most cases were of the age group of 41-50 years (49.70%). Most of the patients belonged to perimenopausal age groups. Mean age of women undergoing hysterectomy for gynecological indications in the present study is 46.96 years

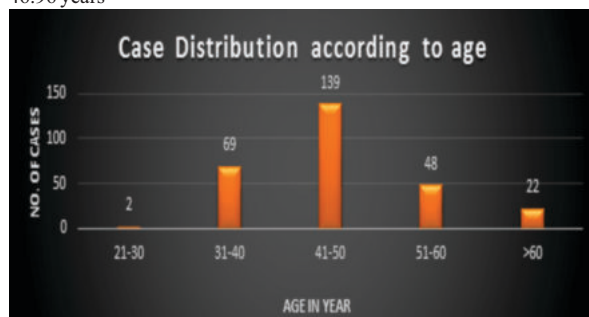


Figure 1: Bar diagram show the age distribution of hysterectomy cases

Majority of women undergoing Hysterectomy had two or more children 254 (90.70%), 21 (7.50%) were para one (P1) and 5 patients were nulliparous (P0). Amongst the nulliparous women undergoing hysterectomy two had endometrial carcinoma, two women had leiomyoma and one patient had endometrial hyperplasia. All 5 patients were elderly but nulliparous.

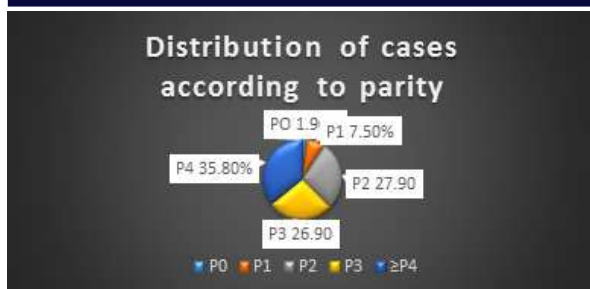


Figure :2 Distribution of cases according to parity

Table-1 : Distribution of cases according to clinical symptoms

CLINICAL FEATURES	NO. OF CASES	%
Menstrual related problem	167	59.60
Pain Abdomen	71	25.35
Post Menopausal Bleeding	16	5.70
Mass per abdomen	24	8.60
Mass per vaginum	41	14.64
Discharge per vaginum	19	6.80
Difficulty in defecation	09	3.21
Urinary problems	12	4.28

Most patients presented with menstrual bleeding related problems. In which heavy bleeding is most common menstrual abnormality in perimenopausal women followed by irregular menstrual bleeding other complaints are pain the time of menses (dysmenorrhoea), white discharge per vaginum, foul smelling discharge, chronic pelvic pain and mass per abdomen and mass per vaginum with difficulty of passing urine or difficulty in defecation. These complaints are associated with each other in many patients.

Table 2:- Distribution Of Cases According To Anemia Grading (WHO)

GRADING OF ANEMIA	NO. OF CASES	%
MILD (11-11.9)	64	22.80%
MODERATE (8-10.9)	104	37.15%
SEVERE(<8.0)	32	11.40%

Out of 280 patients in our study 200 patients (71.35%) were anemic. In which 104 patients (37.15%) were moderate anemia, 64 patients (22.80%) were mild anemic and 32 patients (11.40%) were severely anemic while 80 patients (28.65%) have hemoglobin ≥ 12 gm/dl which was normal. We used WHO criteria of anemia in non-pregnant women to categorized patients

Table 3: Shows The Clinical Indication For Hysterectomy In The Study Group (according To Palm Coien Classification)

Sl. No.	Clinical Diagnosis	No. of Cases	Percentage (%)
1.	AUB-L	132	47.15
2.	AUB-A	62	22.15
3.	Prolapsed Uterus	37	13.20
4.	AUB-L+A	17	6.05
5.	AUB-P	13	4.65
6.	Carcinoma Cervix	08	2.86
7.	Tubo-ovarian mass	04	1.44
8.	Endometrial hyperplasia	04	1.44
9.	Cervical Fibroid	01	0.36
10.	Endometrial adenocarcinoma	01	0.36
11.	Pyometra	01	0.36
TOTAL		280	100

AUB- Abnormal uterine bleeding, **AUB-L-** Leiomyoma, **AUB-A-** Adenomyosis, **AUB-L+A-** leiomyoma with Adenomyosis, **AUB-P-** Polyp,

Out Of 280 cases the most common clinical diagnosis is Fibroid uterus(AUB-L) in 132 cases (47.15%), followed by Adenomyosis (AUB-A) in 62 cases (22.15%) and Prolapse uterus in 37 cases (13.20%), and other clinical diagnosis are uterine polyp (AUB-P), Carcinoma cervix, Tubo-ovarian mass, Cervical Fibroid, Endometrial Adenocarcinoma, Pyometra etc

Table4: Distribution of hysterectomies

S.No.	Type of Hysterectomy	No. Of Cases	%
1.	Total abdominal hysterectomy (TAH)	75	26.80

2.	Total abdominal hysterectomy with unilateral salpingo-oophorectomy (TAH+USO)	11	3.92
3.	Total abdominal hysterectomy with bilateral salpingo-oophorectomy (TAH+BSO)	115	41.07
4.	Vaginal hysterectomy (VH)	61	21.75
5.	Laparoscopic assisted vaginal hysterectomy(LAVH)	15	5.35
6.	Total laparoscopic hysterectomy (TLH)	3	1.10
TOTAL		280	100%

1.Among this 280 cases of hysterectomies, 201 (71.80%) were abdominal route (TAH,TAH+BSO,TAH+USO) and 61 (21.80%) were vaginal route (VH) & 18 cases (6.40%) were Laparoscopic assisted hysterectomy(TLH,LAVH). Of the 201 abdominal route, total abdominal hysterectomy with bilateral salpingo-oophorectomy was the commonest with 115 cases (41.07%).

Table 5: Histopathological diagnosis

Sl. No.	Histopathological Findings	No. of cases	Percentage (%)
1.	Leiomyoma/Leiomyomatous Polyp	139	49.65
2.	Adenomyosis +Leiomyoma	14	5.00
3.	Adenomyosis	59	21.10
4.	Endometrial polyp	15	5.35
5.	Endocervical polyp	03	1.07
6.	Endometriosis	01	0.36
7.	Cystic teratoma of ovary	01	0.36
8.	Atypical hyperplasia of endometrium	04	1.42
9.	Serous cyst of ovary	01	0.36
10.	Adenoca. of Endometrium	03	1.07
11.	Leiomyoma of cervix	01	0.36
12.	SCC Cervix	08	2.90
13.	Genital tuberculosis	01	0.36

On Histopathological examination, the commonest finding was Leiomyoma (49.65%) which was similar to clinical indication. Adenomyosis (21%) was detected as second most common finding

Table 6-Correlation between Clinical Finding and Histopathological diagnosis

Clinical diagnosis	No. Of Cases	Histopathological Finding	Percentage Correlated
AUB-L (Leiomyoma)	132	Leiomyoma 124 Unremarkable 08	94%
AUB-A (Adenomyosis)	62	Adenomyosis 55 Unremarkable 07	88.70
Leiomyoma+ Adenomyosis	17	Leiomyoma+Adenomyosis 14 Leiomyoma 03	82.40%
AUB-P (POLYP)	13	Endocervical polyp 03 Endometrial polyp 10	100%
Carcinoma cervix	08	Squamous cell carcinoma cervix 08	100%
Tubo-ovarian mass	04	Cystic teratoma of ovary 01 Serous cyst of ovary 01 Endometriosis 01 Genital tuberculosis 01	50%
Endometrial hyperplasia	04	Atypical hyperplasia of endometrium 03 Endometrial adenocarcinoma 01	75%
Endometrial adenocarcinoma	01	Endometrial adenocarcinoma 01	100%
Pyometra	01	Endometrial carcinoma 01	
Cervical fibroid	01	Cervical fibroid 01	100%
Uterine prolapse	37	Leiomyoma 12 Endometrial polyp 05 Adenomyosis 04 Endometrial hyperplasia 01	

The above table shows that out of 132 cases of leiomyoma 124(94%) cases confirmed by biopsy finding and in case of adenomyosis out of 62 cases 55 (88.70%) cases confirmed by histopathological reports. While in carcinoma of cervix 100% cases are confirmed by HPE reports.

DISCUSSION

This study has been taken up with the aim to know the Correlation between Clinical diagnosis and Histopathological finding in Hysterectomy Cases. The clinical indication to perform this major surgery must always be justified as it has own psychological, emotional, medical, hormonal and sexual effects on a female's life. So histopathological analysis serves to evaluate the appropriateness of the indications of hysterectomy.

In the present study 280 patients were included in which majority of women undergoing hysterectomy had parity two or more than two (90.70%) only 5 patients were nulliparous and elderly age group.

Most common chief complaint of patients were menstrual related problems in which heavy and irregular menstrual bleeding were most common and associated complaint were dysmenorrhea

In the present study the age ranged from 28-80 years with a mean age of 46.96 years. In Dharmendra singh⁽⁷⁾ et al (2017) study the range between 14 to 78 years with mean age of 45 years & in Subrata P⁽⁸⁾ et al (2018) age range from 19 to 78 years and mean age was 45.78 years.

The peak age of Hysterectomy in present study is in 5th decade (49.70%). The study done by Dharmendra⁽⁷⁾ et al Subrata P⁽⁸⁾ et al, Sujata R⁽⁹⁾ et al, Sarvana A⁽¹⁰⁾ et al, Patil H⁽¹¹⁾ et al, and Dombale V⁽¹²⁾ et al had similar finding.

In the present study the most common route of hysterectomy was Abdominal route (71.80%). Similar finding were reported by Subrata P⁽⁸⁾ et al 77.26% cases done by abdominal route and by Sujata R⁽⁹⁾ et al 70.20% cases done by abdominal route. Vaginal Hysterectomy in our study done in 21.80% cases which was similar to Subrata P et al study. The most common clinical indication for Hysterectomy in present study is AUB-L (leiomyoma) in 132 cases (47.15%). Similar finding were observed by Riffat Jaleel⁽¹³⁾ et al 67 cases (40.40%) and Subrata p⁽⁸⁾ et al 304 cases (32%) while in the study by Dharmendra⁽⁷⁾ et al AUB-L was most common indication in 197 cases (51.0%) which is more than our Study.

The most common histopathological finding in myometrium in our study was Lieomyoma in 139 (49.65%) cases which is similar to most of other studies like in dharmendra⁽⁷⁾ et al Lieomyoma was found in 53.80 % cases. In Sujata R⁽⁷⁾ et al study Lieomyoma was most common HPE finding in 42.58% cases.

Most common histopathological finding in endometrium in our study was proliferative phase (42.85%) which was similar to the study by Sujata R who also report proliferative phase in 53.54 % cases whereas greater incidence is quoted by Dharmendra et al who found proliferative phase in 83.90% cases.

In the present study Adenomyosis was found in 59 (21.10%) of cases which similar to the study of Subrata P et al in which 20.32% cases were Adenomyosis.

In the present study 14 cases (5%) of adenomyosis are associated with leiomyoma. In Sujata R et al 16.77% cases are associated with leiomyoma.

The incidence of carcinoma of cervix in the present study was 08 cases (2.85%) of total 280 cases. Higher incidence was noted in Sujata R et al with 09 cases (5.80%) of 155 cases and 5.40% (28 out of total 520 cases) was found in Sarita Nair⁽¹⁴⁾ et al (2019) study. The incidence is variable because these studies are small and done at hospitals with variable resources for operating cancer cervix patients.

Only few studies have compared preoperative diagnosis with the histopathology of hysterectomy specimens. We have found that majority of preoperative diagnosis of our cases were confirmed on histopathology. In our study 221/243 (90.95%) clinical diagnosis were confirmed in histopathology. Out of 280 cases 37 cases was uterine prolapse so these 37 cases are exclude in calculation correlation (280-37=243 cases).

In other studies like Subrata P⁽⁸⁾ et al (2018) 67.57% preoperative diagnosis were confirmed in Histopathological finding. Dinesh Pal⁽¹⁵⁾ et al (2017) studied 105 TAH cases in which 96.07% cases of fibroid were confirmed in the histopathological studies.

In Saima parveen⁽¹⁶⁾ et al (2014) 72% preoperative diagnosis were confirmed on histopathology.

Lee NC⁽¹⁷⁾ found that of 1283 women studied, 80% of preoperative diagnosis were confirmed in the histopathological studies. The availability of diagnostic aides at different institutions is different which affect the rate of confirmation and good co-relation between preoperative diagnosis and the result of histopathology of hysterectomy specimen.

CONCLUSION

Meticulous preoperative evaluation results in improving diagnostic accuracy, so that clinico-pathological correlation is good. The present study reveals that correlation between clinical (preoperative) diagnosis and postoperative Histological diagnosis is 90.95% Histopathological examination revealed different or additional diagnosis in 9.05% cases.

Availability of better diagnostic aids like tumor markers ,pap's smear, FNAC, Endometrial aspiration cytology, USG, CT scan ,MRI have all resulted in improving preoperative diagnosis. They help to avoid unnecessary surgery but have their own limitations (False positive & False negative results) thus affecting the clinical to histopathological correlation.

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