



A CLINICOPATHOLOGICAL CORRELATION OF ABDOMINAL HYSTERECTOMY CASES- PROSPECTIVE STUDY IN RURAL TERTIARY CARE HOSPITAL

Gynaecology

Prof Dr Mahendra G Professor and head of the department of OBG Adichunchunagiri hospital and research centre, BG Nagara, Mandya, Karnataka

Dr Ankitha C R* Post Graduate of the department of OBG Adichunchunagiri hospital and research centre, BG Nagara, Mandya, Karnataka *Corresponding Author

Prof Dr Ravindra S Pukale Professor and head of the department of OBG Adichunchunagiri hospital and research centre, BG Nagara, Mandya, Karnataka

ABSTRACT

INTRODUCTION: Hysterectomy is the most commonly performed gynecological surgery throughout the world and an effective treatment for a wide range of gynecological disease. Histopathological analysis becomes mandatory to have a definitive diagnosis and to plan for further management. The aim and objective of this study is to review the clinical profile, indications for hysterectomy and to assess the correlation between the clinical diagnosis and histopathological report.

METHODS: This prospective study was conducted on all the patients undergoing abdominal hysterectomy from January 2018 to October 2019 in the department of obstetrics and gynecology at AIMS, BG Nagara Karnataka. Detailed history, clinical examination and provisional diagnosis of all the patients who underwent abdominal hysterectomy during the study period was recorded. Histopathological diagnosis was correlated with pre-operative diagnosis.

RESULTS: During the study period 313 patients underwent abdominal hysterectomy. Of this 52.07% of cases were between the age group of 41-50 years, the most common age group. Heavy menstrual bleeding and pain abdomen were the common presenting symptoms. Most common pre-operative diagnosis was fibroid followed by DUB. Correlation between clinical diagnosis and histopathology was 92.5% for fibroid, 53.5% for adenomyosis and 63.1% for ovarian tumor.

CONCLUSION: Hysterectomy is the widely used treatment modality in the world. Ultimate diagnosis is mainly by histology. Histopathological diagnosis correlates well with pre-operative clinical diagnosis. The most common pathology identified in hysterectomy specimens is leiomyoma accounting to 92.5% of clinico-pathological correlation. Thus histopathology is mandatory for confirming the diagnosis and ensuring optimal management, especially in malignant diseases.

KEYWORDS

Abdominal hysterectomy, Histopathology, Clinical diagnosis.

INTRODUCTION:

Hysterectomy is one of the most common surgical procedures done in peri and postmenopausal women.¹ It is the second most common major surgical procedure performed by the gynaecologists all over the world next to caesarean section.² In India hysterectomy rate is 6% as compared to USA and UK with 10 to 20%. In November 1843, Charles Clay performed the first abdominal hysterectomy in Manchester, England and in 1929, Richardson MD performed the first total abdominal hysterectomy.³

Since the early 20th century, hysterectomy is the definitive treatment of pelvic pathology including fibroid, abnormal heavy bleeding, chronic pelvic pain, endometriosis, adenomyosis, uterine prolapse and carcinoma of the reproductive organs.¹ Around 60 to 80% of the hysterectomies are abdominal. 83% of the gynaecologists recommend oophorectomy in post menopausal women, 50% in Perimenopausal women and <5% in premenopausal women at the time of hysterectomy.¹

Histopathological examination of the uterus and adnexa plays a crucial role in making a correct and exact diagnosis, which has a insightful impact on the management of the patients.³ Histopathological examination of surgical specimens carries ethical, legal, diagnostic and therapeutic significance.⁴ Histopathological examination (HPE) of specimens is necessary for both diagnostic and therapeutic purpose, mainly for carcinoma patients where adjuvant therapy depends on the grade of the lesion and its extent.² However, In many patients suspicious of malignancy, HPE helps in getting a definitive diagnosis and also in deciding its further management.²

AIMS AND OBJECTIVES:

Is to review the clinical profile, indications for hysterectomy and to assess the correlation between the clinical diagnosis and histopathological report.

METHODS:

This prospective study was conducted in the department of obstetrics

and gynaecology at AIMS, BG Nagara Karnataka from January 2018 to October 2019. Detailed history, clinical examination and provisional diagnosis of all the patients who were to undergo abdominal hysterectomy during the study period was recorded. All hysterectomy specimens were then sent for histopathological examination to department of pathology in our hospital.

Histopathological diagnosis of all the abdominal hysterectomy cases was collected and the reports were correlated with pre-operative diagnosis. All the data was entered in the excel sheet and correlation between the clinical diagnosis and pathological diagnosis was estimated.

RESULTS:

A total of 314 abdominal hysterectomies were done between January 2018 to October 2019 in our hospital. The mean age of the patients undergoing hysterectomy was 43.81 years with minimum age of 23 years and maximum age of 70 years.

Table 1: Age distribution of cases

AGE IN YEARS	FREQUENCY	PERCENTAGE
21-30	9	2.9
31-40	105	33.4
41-50	162	51.6
51-60	27	8.6
>60	11	3.5
TOTAL	314	100.0

Table 1 shows the age wise distribution of the patients. Out of 314 cases 162 (51.6%) were in the age group of 41-50 yrs. 105 (33.4%) were in the age group of 31-40 yrs. 27 (8.6%) were in the age group of 51-60 yrs.

Table 2: Parity distribution of cases

PARITY	FREQUENCY	PERCENTAGE
NULLIPAROUS	3	1.0
P1	36	11.5
P2	188	59.9
P3	65	20.7
P4	13	4.1
P5	6	1.9
P6	2	0.6
P7	1	0.3
TOTAL	314	100.0

Table 2 shows the parity distribution of the patients. 275 (87.57%) of patients were multiparous. 3 (1%) were nulliparous women who underwent hysterectomy during the study period

Table 3: Distribution of presenting symptoms

COMPLAINTS	FREQUENCY	PERCENTAGE
Heavy menstrual bleeding	184	58.6
Pain abdomen	94	29.9
Post menopausal bleeding	26	8.3
Mass per abdomen	10	3.2
Total	314	100.0

Table 3 shows the distribution of the patients on the basis of presenting symptoms. The most common presenting symptom was heavy menstrual bleeding i.e. 184 (58.6%) followed by pain abdomen 94 (29.9%).

Table 4: Frequency distribution of associated co-morbidities

CO-MORBIDITY	FREQUENCY	PERCENTAGE
YES	66	21.0
NO	248	79.0
TOTAL	314	100.0

Table 4 shows the frequency distribution of associated co-morbidities. Out of 314 patients 66 (21%) of them had one or more associated co-morbidities the most common one being hypertension (42.4%). 24 (36.4%) of the patients had associated hypothyroidism and 19 (28.8%) of them had diabetes mellitus.

Table 5: Distribution of associated co-morbidities

TYPE OF CO-MORBIDITY	FREQUENCY	PERCENTAGE
Anemia	14	21.2
Bronchial asthma	6	9.1
Diabetes mellitus	19	28.8
Epilepsy	1	1.5
Hypertension	28	42.4
Hypothyroidism	24	36.4
Hyperthyroidism	1	1.5
IHD	1	1.5

Table 6: Frequency distribution of clinical diagnosis

DIAGNOSIS	FREQUENCY	PERCENTAGE
Adenomyosis	34	10.8
Ca Endometrium	4	1.3
Ca Ovary	17	5.4
Complex ovarian cyst	10	3.2
DUB	85	27.1
Endometrial hyperplasia	10	3.2
Endometriosis	1	0.3
Leiomyoma	153	48.7
TOTAL	314	100.0

Table 6 shows distribution of pre-operative diagnosis of all the patients undergoing abdominal hysterectomy during the study period. Out of 314 cases 153 (48.7%) were clinically diagnosed as fibroid uterus. 85 (27.1%) were diagnosed to have DUB and 34 (10.8%) were diagnosed to have adenomyosis. 17 (5.4%) were diagnosed to have Ca Ovary. The other less common diagnosis was Ca Endometrium, complex ovarian cyst, endometrial hyperplasia and endometriosis.

Table 7: Frequency distribution of type of hysterectomy

SURGERY	FREQUENCY	PERCENTAGE
TAH	189	60.2
TAH+BSO	80	25.5
TAH+LSO	21	6.7
TAH+RSO	9	2.9
STAGING LAPAROTOMY	15	4.8
TOTAL	314	100.0

Table 7 shows the frequency distribution of type of abdominal hysterectomy. The most common type of abdominal hysterectomy noted in our study was total abdominal hysterectomy (TAH) i.e. 189(60.2%). 80 (25.5%) patients underwent total abdominal hysterectomy with bilateral salphingo-oophorectomy (TAH+BS O). 21 (6.7%) of them underwent TAH+LSO and 9 (2.9%) underwent TAH+RSO. 15 (4.8%) of them underwent staging laparotomy.

Table 8: Frequency distribution of histopathological diagnosis

HPE	FREQUENCY	PERCENTAGE
Adenomyosis	86	27.4
Benign cyst	12	3.8
Ca Endometrium	7	2.2
Ca Ovary	14	4.5
Chronic Cervicitis	1	0.3
Endometrial Hyperplasia	25	8.0
Endometriosis	1	0.3
Leiomyoma.	164	52.2
Normal	4	1.3
TOTAL	314	100.0

Table 8 shows the frequency distribution of pathological diagnosis. On histopathological examination the commonest lesion was found to be leiomyoma (52.2%). The other pathologies noted were adenomyosis (27.4%), endometrial hyperplasia (8%), Ca Ovary (4.5%), benign ovarian cyst (3.8%) and Ca Endometrium (2.2%). 4 cases (1.3%) had normal histological findings

Table 9: Clinical diagnosis and histopathological report cross tabulation.

D I A G N O S I S	HPE										TOTAL	P VALUE
		Adenomyosis	Benign cyst	Ca Endometrium	Ca Ovary	Chronic cervicitis	Endometrial hyperplasia	Endometriosis	leiomyoma	normal		
	adenomyosis	30	0	0	0	0	3	0	1	0	34	0.000
	Ca endometrium	0	0	3	0	0	1	0	0	0	4	
	Ca Ovary	0	3	0	13	0	0	0	1	0	17	
	Complex ovarian cyst	0	9	0	1	0	0	0	0	0	10	
	DUB	51	0	1	0	1	16	0	12	4	85	
	Endometrial hyperplasia	3	0	3	0	0	4	0	0	0	10	
	endometriosis	0	0	0	0	0	0	1	0	0	1	
	leiomyoma	2	0	0	0	0	1	0	150	0	153	
TOTAL		86	12	7	14	1	25	1	164	4	314	

There was significant correlation at 0.00 level observed between clinical diagnosis and histopathological diagnosis. There was positive correlation between fibroid and leiomyoma. 98.04% of fibroid diagnosed clinically were confirmed on histopathology as leiomyoma. 88.24% of cases diagnosed clinically as adenomyosis were confirmed on histopathology as same. Similarly, ovarian malignancy diagnosed clinically had positive histopathology correlation of 76.5%. Out of 85 cases of DUB, histopathologically 51 of them were diagnosed with adenomyosis, 16 with endometrial hyperplasia, 12 with leiomyoma, 4 had normal histology and 1 showed Ca Endometrium and 1 with chronic cervicitis. The clinico-pathological cross tab correlation of the diagnosis is depicted in **Table 9**.

DISCUSSION:

Hysterectomy is the most commonly performed gynaecological surgery throughout the world. It is most frequently done through abdominal route.² Provides a definitive care to many diseases involving the uterus as well as the adnexa like fibroid, DUB, adenomyosis, endometriosis, pelvic organ prolapse and malignancy.¹ In our study the commonest age group undergoing abdominal hysterectomy was between 41-50 years. This result is comparable with the study done by Sabita Shrestha et al.² The mean age of patients was 46.43 years. Similar to research conducted by G Gupta et al.¹ Around 90% of the cases were multiparous and only 3 cases were nulliparous which was also reported in the study done by Sabita Shrestha et al.²

Heavy menstrual flow and pain abdomen are the 2 main symptoms in our study each presenting 58.6% and 29.9% respectively. Abnormal menstrual flow or the heavy menstrual flow as a single most common symptom in patients undergoing abdominal hysterectomy is stated in various studies. Sabita Shrestha et al found 46.8% of patients having heavy menstrual flow.² Similar result of 23.96% of patients presented with heavy menstrual flow in a study conducted by Dr Prem Singh et al.³ The most common pre-operative clinical diagnosis or indication for abdominal hysterectomy in our study was fibroid uterus constituting 48.7% of total cases. Sabita Shrestha et al quoted 45.9% and Subrata P et al found 32% of total cases diagnosed as fibroid as an indication for hysterectomy similar to our observation.^{2,5}

In contrast to our result DUB was the most common clinical diagnosis in the study done by Yogesh Neena et al.⁴ On histopathological examination, the most common lesion noted was leiomyoma 52.2%. Histopathological analysis correlated well with the preoperative

clinical diagnosis in majority of cases. 98.04% of fibroid cases were confirmed histologically as leiomyoma. Clinico-pathological correlation for adenomyosis was 88.24% and for ovarian malignancy was 76.5%. These results were compatible to the results obtained by Sabita Shrestha et al.² G Gupta et al and Subrata P et al also found the significant correlation between clinical diagnosis and histopathology.^{1,5}

CONCLUSION:

Hysterectomy still remains the widely used treatment modality even in developed countries. The ultimate diagnosis is only on histology and hence every specimen must be subjected to histopathological examination. Histopathological analysis correlates well with the preoperative clinical diagnosis for hysterectomy. Benign pathologies are more common than the malignant pathologies. The most common pathology identified in hysterectomy specimens is leiomyoma. Uterine fibroids and adenomyosis followed by ovarian tumour are the common condition which require hysterectomy on day to day practice. Histopathology is thus mandatory for confirming diagnosis and ensuring optimal management particularly in malignant diseases.

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