Original Research Article

Abdominal hysterectomy: analysis of clinico-histopathological correlation in Western Rajasthan, India

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ABSTRACT

Background: Hysterectomy is the most common gynecological surgery done in the females worldwide as it provides definitive cure to a wide range of gynecological diseases, both benign and malignant. The indications to perform this major surgery should always be justified and the pathology should be proved histopathologically. Histopathological analysis and review is mandatory to evaluate the appropriateness of the hysterectomy.
Methods: A retrospective, longitudinal study was conducted in the Department of Obstetrics and Gynecology, UMAID Hospital, Dr. S.N. M.C. Jodhpur (Raj.) during October 2014 to March 2015.Total 105 cases were studied during this period. The study included all women undergoing planned abdominal hysterectomy. Data was recorded on proformas, including demographic characteristics and clinical features. Hysterectomy specimens were saved in 10% formalin and sent to the Department of Pathology. Histopathology reports were analyzed and compared with the indications of surgery to draw various informative conclusions.
Results: Of 105 cases, 55(52.38%) were in the age group of 41 – 50, which comprised the commonest age group undergoing the surgery. Maximum women (95%) those underwent hysterectomy were multiparous. Most common preoperatively clinical diagnosis was leiomyoma uterus which was diagnosed clinically and sonographically in 51(48.57%) cases. On Histopathological examination, the commonest pathology, similar to clinical impression, was found to be Leiomyoma at 50.48% (n = 53). Adenomyosis (21.90%) was detected as Second most common pathology. Histopathological confirmation of pre-operative diagnosis was 89% for malignancy, 96% for fibroids, 100% for adenomyosis, 100% for pelvic inflammatory disease.
Conclusions: There was a high correlation when the clinical diagnosis was a fibroid, adenomyosis and ovarian mass. Every hysterectomy specimen should be subjected to histopathological examination because it is mandatory for conforming diagnosis and ensuring optimal management, in particular of malignant disease.

Keywords: Abdominal hysterectomy, Histopathological, Leiomyoma

INTRODUCTION

Hysterectomy is the second most frequently performed major surgical procedure on women all over the world especially peri and post-menopausal, second only to caesarean.[1] Hysterectomy is an effective treatment option for many conditions like fibroid, abnormal uterine bleeding, endometriosis, adenomyosis, uterine prolapse, pelvic inflammatory disease and cancer of reproductive organ when other treatment options are contraindicated or have failed, or if the woman no longer wishes to retain her menstrual and reproductive function. About 70-80% of hysterectomies are performed by the abdominal approach.[2] Historically Charles Clay performed the first subtotal hysterectomy in Manchester England in 1843 and the first Total abdominal hysterectomy was done in 1929.[3]

Histopathological analysis of the hysterectomy specimens is mandatory for diagnostic purposes and to assess the pattern of lesions common in the uterus and adenexa in a particular population. The importance of histopathological examination is seen, especially in patients with genital cancer, where the adjuvant treatment is dependent upon the grade and extent of the invasion of the disease. The diagnosis of adenomyosis is established only by histopathological examination, while DUB is a diagnosis of exclusion. Some of the patients may be suspected of having a malignancy on pre-operative assessment, histopathological examination may help in ruling out this suspicion. Whether every hysterectomy is necessary is a topic of debate and appropriate indications for hysterectomy are subject of substantial disagreement and there should be a periodical audit of this issue for its indications.[4]

METHODS

This retrospective study was conducted in the Department of Obstetrics and Gynecology, UMAID Hospital, Dr. S.N. M.C. Jodhpur (Raj.) during October 2014 to March 2015.Total 105 cases were studied during this period.

The study included all women undergoing planned abdominal hysterectomy. Data was recorded on proformas, including demographic characteristics and clinical features. Only one dominant diagnosis was considered and documented as the indication for the procedure.

Hysterectomy specimens were saved in 10% formalin and sent to the Department of Pathology, Dr. S.N. M.C. Jodhpur (Raj.) .Histopathology reports were analyzed and compared with the indications of surgery to draw various informative conclusions.

RESULTS

A total of 105 total abdominal hysterectomy were done between October 2014 to March 2014. The age groups that underwent hysterectomy for various indications ranged from 20-75 years. Of 105 cases, 55(52.38%) were in the age group of 41-50 which comprised the commonest age group undergoing the surgery. 29.52% were in the age group of 31-40 years (Table 1). Maximum women (95%) those underwent hysterectomy were multiparous. Most of them (67.61%) belongs to the rural areas (Table 1). Out of 105, 56(53.33%) were attended the outdoor with the menstruation related excessive irregular or frequent bleeding problems and second most common chief complaints was pain abdomen which was present in 36(34.28%) women (Table 2).

Table 1: Demographic picture of patients.

Age(years)	<20	21-30	31-40	41-50	51-60	>61
	1 (0.95%)	6 (5.71%)	31 (29.52%)	55 (52.38%)	9 (8.57%)	3 (2.85%)
Parity	0	1	2-3	>3		
	1(0.95%)	5 (4.76%)	61 (58.09%)	38 (36.19%)		
Residence	Rural	Urban				
	71 (67.61%)	34 (32.38%)				

Most common preoperatively clinical diagnosis was leiomyoma uterus which was diagnosed clinically and sonographically in 51 (48.57%) cases.

Table 2: Distribution according to clinical symptoms.

Symptoms	No. of cases	Percentage
Menstrual related problems	56	53.33%
Pain abdomen	36	34.28%
Urinary symptoms	1	0.95%
Excessive discharge per vaginum	2	1.90%
Backache	5	4.76%
Lump abdomen	3	2.85%
Postmenopausal bleeding	2	1.90%

Second most common clinical diagnosis for abdominal hysterectomy was dysfunctional uterine bleeding in 27 (25.71%) women. 6 (5.71%) cases were preoperatively diagnosed as adenomyosis (Table 3).

Table 3: Distribution according to clinical indication.

Clinical diagnosis	Cases	Percentage
Leiomyoma uterus	51	48.57%
Dysfunctional uterine bleeding	27	25.71%
Postmenopausal bleeding	2	1.90%
Ovarian cyst	4	3.80%
PID	2	1.90%
Ovarian mass	9	8.57%
Adenomyosis	6	5.71%
Endometrial hyperplasia	4	3.80%

Table 4: Histopathological diagnosis

Histopathological report	No. of cases	Percentage
Leiomyoma	53	50.48%
Adenomyosis	23	21.90%
Fibroid + Adenomyosis	4	3.80%
Endometritis	2	1.90%
Endometrial hyperplasia	2	1.90%
Endometrial adenocarcinoma	2	1.90%
Ovarian cyst	3	2.85%
Ovarian tumour	8	7.62%

On Histopathological examination, the commonest pathology, similar to clinical impression, was found to be Leiomyoma at 50.48% (n=53). Adenomyosis (21.90%) was detected as Second most common pathology on histopathological examination followed by ovarian tumour (7.62%) (Table 4). The correlation between the clinical and histopathological diagnosis with respect to benign uterine pathologies was found to be very good. 96.07% of the Fibroids diagnosed clinically were confirmed on histopathology as leiomyoma. However, double pathologies of Adenomyosis in 4 cases coexisted. Majority of cases (62.96%) pre-operatively diagnosed as DUB were found to have adenomyosis. Histopathological confirmation of pre-operative diagnosis was 89% for malignancy, 96% for fibroids, 100% for adenomyosis, 100% for pelvic inflammatory disease (Table 5 and Figure 2).

Table 5: Correlation between clinical and histopathological diagnosis.

Clinical diagnosis	No. of cases	Histopathological report		Percentage correlated (%)
Leiomyoma uterus	51	Leiomyoma	49	96.07%
		Unremarkable	2	
Dysfunctional uterine bleeding	27	Adenomyosis	17	7.40%
		Leiomyoma	4	
		Leiomyoma +Adenomyosis	4	
		Unremarkable	2	
Ovarian cyst	4	Cystic teratoma	2	75%
		Chocolate cyst	1	
		Unremarkable	1	
PID	2	Endometritis	2	100%
Ovarian tumour	9	Serous-cystadenoma	5	88.89%
		Serous cystadenocarcinoma	2	
		Granulosa cell tumour	1	
		Unremarkable	1	
Adenomyosis	6	Adenomyosis	6	100%
Endometrial hyperplasia	4	Endometrial hyperplasia	2	50%
		Endometrial carcinoma	2	

DISCUSSION

Hysterectomy is the most common gynecological surgery done in the females worldwide as it provides definitive cure to a wide range of gynecological diseases, both benign and malignant. The indications to perform this major surgery should always be justified and the pathology should be proved histopathologically. This is so because the hysterectomy is a major surgery which has its own physical, economic, emotional, sexual and medical significance to the women. Histopathological analysis and review is mandatory to evaluate the appropriateness of the hysterectomy. In present study, The commonest age group undergoing Abdominal hysterectomies was found to be 41-50 years in our study. This is in accordance with Tamilselvi Ramachandran et al, G Gupta et al, Ranabhat SK et al, Surti HB et al in India where the commonest age group is similar.[5-8] In a Nepalese study, the mean age was 46.3 years.[9] The average parity in our study was three with a range zero to nine. Our finding is comparable with the zero to eleven parity ranged reported in Ibadan, Western Nigeria.[10] Most common indication for hysterectomy in our study was uterine Fibroid (48.57%) and dysfundtional uterine bleeding (25.71%). The commonest indication was fibroid (34%), followed by DUB (26%) in the study by Shergill SK.[11] Adelusola KA et al found fibroid as a most common indication in 48% cases.[12] Jha R found that leiomyoma was the indication in 24.9%, ovarian tumour in 14.9% and DUB in 7.7% of the cases.[9] Similar results have been reported by Pokras and Hufnagel.[13]

Diagnosis of dysfunctional uterine bleeding (DUB) was made in 25.71% cases. However, on histopathological examination, only 7.40% had finding consistent with the diagnosis of DUB while the rest of the patients operated

with this pre-operative diagnosis were found to have adenomyosis (17 cases) and leiomyoma (4 cases). These findings were missed preoperatively. DUB is a blanket diagnosis, and inadequate work-up, either due to financial constraints or the pressure of the patient to get the surgery done earlier, leads to such scenario. Various previous studies found that the actual diagnosis confirmed by histopathological examination was missed pre-operatively in the majority of cases operated with the preoperative indication of DUB.[14-16] This result emphasizes the fact the pre-operative diagnosis of DUB should be made only after comprehensive and necessary investigations are done. No significant pathology was detected in 7.61 % patients undergoing hysterectomy.

We found that majority of preoperative diagnoses 96.07% of fibroid cases were confirmed on histopathology. Similarly Histopathological confirmation of pre-operative diagnosis was 89% for malignancy, 75% for ovarian cyst, 100% for adenomyosis, 100% for pelvic inflammatory disease. The exception was patients with dysfunctional uterine bleeding in whom pathology like adenomyosis or small fibroids were found on histopathological specimens. Lee NC found that of the 1283 women whom they studied, 80% of the pre-operative diagnoses were confirmed in the potentially confirmable group.[10] Miller studied 246 hysterectomy specimens and found that clinical diagnoses were confirmed in 50% of the cases.[17]

CONCLUSION

In our study, the most common pathology identified among the hysterectomy specimens was leiomyoma. There was a high correlation when the clinical diagnosis was a fibroid, adenomyosis and ovarian mass, However the clinical and pathological correlation are poor when DUB was the preoperative clinical diagnosis.as any surgical procedure, abdominal hysterectomy is also associated with risk factors, thus indication should be carefully evaluated.

Every hysterectomy specimen should be subjected to histopathological examination because it is mandatory for conforming diagnosis and ensuring optimal management, in particular of malignant disease. A yearly audit should be conducted in every government and private institute to collect data and to analyze the pattern of indications and types of histopathological lesions and pattern of diseases.

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