

Hysterectomy: A Clinico-Pathological Correlation of 620 Cases



Medical Science

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ABSTRACT

Hysterectomy is the most commonly performed gynaecological surgery throughout the world. The study is done to identify the most common pathology in hysterectomy specimens and to correlate the clinical diagnosis and histopathological diagnosis in the Pathology Department, Government Medical College, Bhavnagar over a period of May 2012 to April 2015. Each hysterectomised specimen were processed, histopathological diagnosis made and correlated with clinical diagnosis, age, indication for surgery and the surgical approach used. Out of 620 cases, the peak age of hysterectomy was 45-55 years. The commonest indication for hysterectomy was uterovaginal prolapse followed by fibroid. The most common pathology which was identified was leiomyoma followed by adenomyosis. The histopathological confirmation of the pre-operative diagnosis was 97%. A majority of the cases which were pre-operatively diagnosed as Dysfunctional uterine bleeding were found to have adenomyosis. Histopathological diagnosis was found to be the gold standard to ensure the final diagnosis as the management of the malignant disease varied in the benign and malignant diseases.

INTRODUCTION

Women worldwide suffer from gynaecological disorders that require hysterectomy as a treatment option^{1,2} i.e., incidence of hysterectomy is gradually increasing in the Western world as a whole, but it varies considerably from one country to another, reflecting differences in the attitudes of both patients and gynaecologists rather than a variation in pathology³. 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 approach⁴.

Hysterectomy, although an effective treatment for many gynaecological disorders, is a major operation and is not without risk in term of both mortality and morbidity. In response to the consistent demand for this procedure, recent reports have identified hysterectomy as a key health care indicator used to measure and compare hospital performance.⁵ 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 indications⁶.

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 eg., those with postmenopausal bleeding and histopathological examination may aid in ruling out this suspicion.

Methodology

A study conducted at the Department Of Pathology, Government Medical College, Bhavnagar, Gujarat, India. Total 620 hysterectomies were performed over a period of May 2012 to April 2015. The surgical specimens were fixed in 10% formalin, they were paraffin embedded and the blocks were sectioned, stained with routine hematoxylin and eosin stain and examined under microscope for definite histopathological diagnosis. The patient's age, clinical presentation, preoperative diagnosis/indication of hysterectomy and mode of surgeries were reviewed, analyzed and correlated. Obstetrical hysterectomies were excluded from the study. Data was analyzed by using percentages.

Results

A total of 620 hysterectomy specimens were analysed. Of these 620 cases, most of the cases were in the 46-55 years age group (39.68%), which is the most common age group for contracting various diseases [Table-1].

Table 1: Age wise distribution undergoing hysterectomy.

Age in years	No. of cases	Percentage
26-35	019	03.06%
36-45	153	24.68%
46-55	246	39.68%
56-65	187	30.16%
66-75	014	02.26%
>75	001	00.16%

The commonest indication for hysterectomy was uterovaginal prolapse in 31.9% of the cases, followed by fibroid in 30.0% cases and dysfunctional uterine bleeding (DUB) in 29% cases. The various indications for hysterectomy are shown in [Table-2]

Table 2: Indication for Hysterectomy.

Indication	No. of cases	Percentage
Prolapse	198	31.9%
Fibroid	186	30%
DUB	180	29%
Ovarian cyst/tumor	31	5%
Suspected adenomyosis	19	3%
Suspected malignancy	6	0.9%

The most common type of hysterectomy done was total abdominal hysterectomy with or without bilateral salpingo-oophorectomy, followed by vaginal hysterectomy. The most common age group for these abdominal or vaginal hysterectomy was 45-55 years [Table-3].

Table 3: Type of hysterectomy in different age group.

Type of surgery	26-35 years	36-45 years	46-55 years	56-65 years	66-75 years	>75 years	Total
Hysterectomy with Right Salpingo-oophorectomy	1	7	3	0	0	0	11
Hysterectomy with Left Salpingo-oophorectomy	3	7	4	0	0	0	14
Transabdominal Hysterectomy(TAH)	4	76	62	53	0	0	195
TAH with Bilateral salpingo-oophorectomy	11	23	105	80	0	1	220
Vaginal Hysterectomy	0	37	72	54	14	0	177
Subtotal Hysterectomy	0	3	0	0	0	0	3

The histopathological confirmation of the pre-operative diagnosis was 97%. A majority of the cases which were pre-operatively diagnosed as DUB were found to have adenomyosis [Table-4].

Table 4: Confirmation of preoperative diagnosis by Histopathology.

Histopatho Diagnosis	No. of cases	Percentage
Atrophic Endometrium	174	28.1%
Fibroid	136	21.9%
Adenomyosis	74	11.9%
Endometrial hyperplasia	62	10%
Proliferative/secretory phase	50	8.1%
Fibroid + Adenomyosis	44	7.1%
Ovarian cyst/tumor	25	4.0%
Endometrial polyp	19	3.1%
Endometrial hyperplasia + Adenomyosis	12	1.9%
Cervical Intraepithelial Neoplasm	12	1.9%
Endometrial Carcinoma	12	1.9%

The hysterectomies which were done for uterovaginal prolapse showed atrophic endometria and adenomyosis on histopathological examination. Other less frequent lesions which were identified were endometrial hyperplasia, endometrial polyps and endometrial carcinoma. Some of the specimens showed more than one lesion in the body of the uterus, which included the coexistence of leiomyoma and adenomyosis and endometrial hyperplasia and adenomyosis. The pathological examination confirmed the clinical diagnosis in all the cases of abnormal uterine bleeding due to leiomyoma and endometrial carcinoma. A majority of the cases which were pre-operatively diagnosed as DUB were found to have adenomyosis.

Discussion

Hysterectomy is a major surgical procedure which involves the total removal of the uterus with or without the fallopian tubes and ovaries. It is the most common operation performed by the gynaecologist for benign pelvic pathologies like fibroids, adenomyosis, pelvic organ prolapse, pelvic inflammatory disease and malignancies of genital tract.^{2,6,7} Age and parity are factors usually considered before hysterectomy is performed. The peak age for the procedure in our study was 45–55 years as has been observed in many other studies^{2,6,7,8,9,10}.

Current study showed that major complaint of patients was something coming out of vagina followed by excessive menstrual bleeding. Uterine prolapse was to be the most common

indication for hysterectomy in our study, followed by uterine fibroid and dysfunctional uterine bleeding. The commonest indication was fibroid (34%), followed by DUB (26%) in the study by Shergill SK¹¹. Jha R found that leiomyoma was the indication in 24.9%, ovarian tumour in 14.9% and DUB in 7.7% of the cases¹². Similar results have been reported by Pokras and Hufnagel¹³. Clarke A reported the commonest indication to be DUB (58%), followed by fibroids (23.2%)¹⁴.

The commonest surgical approach in the majority of cases in this study was abdominal hysterectomy with and without bilateral salpingoophorectomy followed by vaginal hysterectomy. This is the observation in most of the studies.^{2,4,6,7} Abdominal hysterectomy allows a better visualization of the abdominal cavity during the surgery. Abdominal surgery may be the best choice for hysterectomies done to remove cancer, because it allows a better visualization of the nearby structures. The abdominal route is associated with a longer hospital stay, increased complications and higher costs. Vaginal hysterectomy is associated with a shorter hospital stay and it allows the fastest recovery and healing times. Since vaginal hysterectomy carries a lesser risk and complications, this route is encouraged, especially if the disease is confined to the uterus and if the uterine weight is less than 280gm¹⁵. Chryssiopoulos et al studied 3410 total hysterectomies over a period of 16 years and the abdominal approach was preferred in 85.33% and the vaginal route in 14.67% of the patients¹⁶.

We found that majority of preoperative diagnoses 97% of our cases were confirmed on histopathology. 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 group¹⁷. Miller studied 246 hysterectomy specimens and found that clinical diagnoses were confirmed in 50% of the cases¹⁸.

Conclusion

In our study, the most common pathology identified among the hysterectomy specimens was leiomyoma. In spite of the availability of a number of options of medical treatment and conservative surgeries, hysterectomy still remains the widely used treatment modality in developing as well as the developed countries. Although hysterectomy is quite a safe procedure nowadays, still it should only be performed when a proper indication is justified. Every hysterectomy specimen should be subjected to histopathological examination. Histopathology is mandatory for ensuring a correct diagnosis and thus the management varies with malignant disease. A yearly audit should be conducted in every institute to collect data and to analyze the pattern of indications and types of histopathological lesions and pattern of diseases.

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