

Review of Gynaecological Profile of Hysterectomies in a Rural Tertiary Teaching Hospital

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Received: 21-10-2022 / Revised: 28-11-2022 / Accepted: 20-12-2022

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Conflict of interest: Nil

Abstract

Background: Hysterectomy is the most frequently performed major gynaecological operation next to caesarean section. It remains the chief modality of treatment for various gynaecological conditions. Routes of hysterectomy include abdominal, vaginal, laparoscopic and combined approaches.

Aim of the Study: To analyze the clinical profile, indications and postoperative complications of hysterectomies performed at a rural tertiary teaching hospital.

Methodology: This retrospective study was conducted in the Department of Obstetrics and Gynaecology, Medciti Institute of Medical Sciences, a tertiary teaching hospital at Medchal. Medical records of 240 cases of hysterectomies that were performed from January 2015 to December 2021 were retrieved from Medical Records Department. The socio-demographic profile, indications and postoperative complications of these hysterectomies were collected using a predesigned proforma.

Results: Out of the total 240 hysterectomies, 51.25 % were in the age group of 40-49 years followed by the age group of 50-59 years i.e 19.5 %. Hysterectomy was commonly performed in para 2 and para 3. Common presenting symptoms were menstrual irregularities (55%), followed by mass per vagina (27.5 %). Common indications for hysterectomy were AUB (36.25%), Fibroid (34.58%) and UV prolapse (29.16%). Abdominal hysterectomy(62.5%) was performed more commonly than vaginal hysterectomy (29.16%).

Conclusion: Indications for hysterectomy should be clearly evaluated and patient should be properly counselled about conservative options, risks and benefits of the procedure. Route of hysterectomy has to be decided on individual basis and attending clinician expertise.

Keywords: Hysterectomy, Abdominal, Age, Indications, Complications

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Introduction

Hysterectomy is one of the most frequently performed major gynaecological operation in women worldwide next to caesarean section [1]. Earlier, hysterectomies were associated with high morbidity and mortality mainly because of hemorrhage and infection. However the use of broad spectrum antibiotics, safe anaesthetic techniques and improvement in blood banking services have reduced the morbidity and mortality. Hysterectomy is an effective and definitive treatment option for many diseases of uterus and adnexa. It provides immense patient satisfaction in terms of symptom relief.

Common indications for hysterectomy include abnormal uterine bleeding (AUB), fibroid, endometriosis, adenomyosis, benign ovarian tumors and uterovaginal prolapse. Other indications for hysterectomy include preinvasive malignant conditions of cervix, endometrium, cervical cancer, endometrial cancer and ovarian cancer. Sometimes, hysterectomy is performed as a lifesaving procedure in obstetrics when all other measures fail to control postpartum hemorrhage.

Routes for hysterectomy include vaginal, abdominal, laparoscopic and combined approach. Selection of route for hysterectomy depends on various factors like surgeon's preference and experience, indication for surgery, nature of disease, associated co-morbidities and concomitant procedure. Though, traditionally abdominal or vaginal hysterectomy are performed more frequently, minimally invasive laparoscopic hysterectomy provides rapid recovery, less postoperative pain, lesser complications and shorter hospital stay [2].

As there is remarkable improvement in the conservative management of uterine pathologies, indication of hysterectomy should be clear cut. Ovarian function declines rapidly after hysterectomy even if ovaries are preserved. As with any other major surgical

procedure, hysterectomy may have intra-operative and post-operative complications. The indications are often overused for performing hysterectomy resulting in many unnecessary operations. A study from The United States found that about 70% of patients were inappropriately selected for this major operation [3]. A study conducted by Kameswari and Vinjamuri [4] in Andhra Pradesh shows, 60% of hysterectomies were carried out on women aged under 30 and the discharge summaries of many of these operations were without any information about the procedure. As the uterus has its own medical and emotional significance, hysterectomy should be opted as the last resort when all the other organ preserving measures fail.

The aim of present study is to know the clinical profile, indications, routes and postoperative complications of hysterectomies performed at our institute. The objective is to bring about the facts and figures about the clinical indications and throw some conclusion on justification of hysterectomies done at this institution.

Materials and Methods

This is a retrospective study conducted at Medicity Institute of Medical Sciences (MIMS), a rural tertiary teaching hospital located 35 km away from the city of Hyderabad in Telangana State, India. All women who underwent hysterectomy at MIMS over a time period of 7 years from January 2015 to December 2021 were included in our study.

All hysterectomy cases are recorded in the hospital operation theatre register. Using each woman's unique medical record number, case files obtained and data on demographic variables, clinical profile, indications of hysterectomy, routes of hysterectomy and postoperative complications were collected using a pre-designed proforma. There were no exclusion

criteria. All the hysterectomies elective as well as emergency were included in the study.

Ethical clearance was obtained from The Institutional Ethics Committee before the start of the study. The data obtained was entered in Microsoft Excel sheet and analysed using descriptive frequencies and percentages.

Results

A total of 240 hysterectomies were performed in our study period of 7 years. Out of these only 4 were obstetrical hysterectomies, rest all were gynaecological. Table 1 is showing the age wise distribution of subjects who underwent hysterectomy in our institution. Out of the total 240 cases 3.33% (8 cases) belonged to age group < 30 years, 12.5% (30 cases) were in age group 30-39 years, 51.25% (123 cases) belonged to age group 40-49 years, 19.5% (47 cases) belonged to age group 50-59 years, 8.75% (21 cases) in age group 60-69 years and 4.58% (11 cases) were > 70 years age.

Maximum number (123 cases) of hysterectomised women were found to be in the age group 40-49 years followed by 47 cases in the age group 50-59 years. In this study, majority (85.83%; 206 cases) of hysterectomies were done in women with 2 or more than 2 parity and only 13 cases (5.41%) were nulliparous women (Table-2)

Table 3 shows that, among the total study subjects, 62.5% (150 cases) underwent total abdominal hysterectomy (TAH) and 29.16% (70 cases) underwent vaginal hysterectomy. Only 16 cases underwent laparoscopic procedure, among which Laparoscopic assisted vaginal hysterectomy (LAVH) was done in 12 cases (5%) and Total laparoscopic hysterectomy (TLH) was done in 4 cases (1.66%). Out of the total 240 cases, 70 cases (29.17 %) had bilateral oophorectomy mostly in the postmenopausal group. In 146 cases (60.83%) both the ovaries were preserved, whereas in 24 cases (10%), unilateral oophorectomy was performed mostly in premenopausal women in view of benign ovarian pathologies (Table 4)

Table 1: Age wise distribution of hysterectomy patients

Age in yrs	No. of cases	Percentage (%)
<30	8	3.33
30-39	30	12.5
40-49	123	51.25
50-59	47	19.5
60-69	21	8.75
>70	11	4.58

Table 2: Parity distribution of hysterectomy patients

	No.	Percentage (%)
Nulliparous	13	5.41
Para 1	21	8.75
Para 2	72	30
Para = / > 3	134	55.83

Table 3: Types of Hysterectomy

	No. of Cases	Percentage (%)
TAH	150	62.5
VH	70	29.16
LAVH	12	5
TLH	4	1.66
Caesarean H	4	1.66

Table 4: Concomitant Oophorectomy during TAH

	No. of cases	Percentage (%)
B/L Oophorectomy	70	29.17
U/L Oophorectomy	24	10
Ovaries Conserved	146	60.83

Table 5 is showing distribution of cases of hysterectomies according to indication. AUB was the most common indication for hysterectomy (n=87, 36.25%) followed by fibroid uterus (n=83, 34.58%) and utero-vaginal prolapse (n=70, 29.16%). The less common indications included ovarian pathology (n=16, 6.66%), pelvic inflammatory disease (PID)/Abdominal pain (n=12, 5%), post menopausal bleeding (PMB) (N=12, 5%) and adenomyosis (n=5, 2.08%).

Table 5: Indications of hysterectomies

Indications	Number of cases	Percentage (%)
AUB	87	36.25
Fibroid	83	34.58
UV Prolapse	70	29.16
Ovarian pathology	16	6.66
PID/ Abd. pain	12	5
PMB	12	5
Adenomyosis	5	2.08
Pregnancy related	4	1.66
CIN	1	0.41

Table 6 shows maximum number of patients had menstrual irregularities which were about 55% and next more common complaint was mass per vagina (27.5%). Hemorrhage, wound infection, wound dehiscence and febrile morbidity were commonly encountered complications after hysterectomy. During abdominal hysterectomy, 4 patients had iatrogenic bladder injury. All the injuries were detected intra-operatively and primary repair was done. All these patients had uneventful recovery. No mortality was seen in 240 cases studied.(Table- 7).

Table 6: Distribution of cases as per their complaints

Chief complaint	Number of cases	Percentage (%)
Menstrual irregularities	130	55
Mass per vagina	66	27.5
Pain abdomen	24	10
Mass per Abdomen	6	2.5
PMB	6	2.5
Bleeding/spotting P/V	6	2.5
White discharge	1	0.416
Acute retention of urine	1	0.416

Table 7: Complications of Hysterectomy

Complications	Frequency	Percentage (%)
Hemorrhage	32	13.33
Wound infection	26	10.83
Wound dehiscence	11	4.58
Fever	10	4.16
Bladder injury	4	1.66
Pelvic hematoma	1	0.416
Antibiotic induced colitis	1	0.416

Discussion

Hysterectomy is the second most commonly performed surgical procedure in reproductive age group women, second only to caesarean section. Majority of hysterectomies are performed electively to treat a variety of gynaecologic conditions. Though it is a treatment option for many benign and malignant conditions, it is not free of associated morbidity and mortality. In this study on 240 hysterectomy cases, most of the women were in the age group of 40-49 years (51.25%) followed by 19.5 % in the age group of 50-59 years. This observation is comparable to Manandhar T *et al* [5]. study which reported 50.81% of hysterectomies in the age group of 41-50 years. A study conducted by Shridevi *et al* [6] showed 7% women at 31-40 years of age group, 48.3% women at 41-50 years of age group, 32% women at 51-60 years of age and 12.6% of women were in the age group 61 years and above. Perimenopause, also called menopausal transition generally occurs at around 40-50 years of age during which a woman's body makes a natural shift from more or less regular cycles of ovulation and menstruation towards permanent infertility or menopause. Many studies showed that abnormal uterine bleeding is most common during perimenopausal group [7-9].

In our study, 94.59% of women were multiparous and 5.41% were nulliparous. This is similar to Amirika *et al* [10]. study which reported higher incidence of hysterectomies among parous women (95 %)

and 5% of women were nulliparous. Present study shows maximum number of hysterectomies were performed in para = / >3 (55.83%), followed by para 2 (30%) and para 1 (8.75%). Women who preferred hysterectomy procedure over conservative management for various benign conditions tended to increase with age and had a strong correlation with parity. This seems logical as most of the patients would consent for hysterectomy only after completing their families. In any case, age and parity are important factors that are usually considered before hysterectomy is performed.

The commonest surgical approach in our study was abdominal hysterectomy (n=150, 62.5%) with or without unilateral or bilateral salpingo-oophorectomy. Vaginal route (n=70, 29.16%) was preferred mainly for cases of genital prolapse. 12 cases (5%) underwent laparoscopic assisted vaginal hysterectomy (LAVH) and 4 cases (1.66%) underwent total laparoscopic hysterectomy (TLH). Sucheta KL *et al* [11] and Hymavathi K *et al* [12] also reported that most of their hysterectomy cases were TAH (53% and 60.5%). In our study, commonest type was abdominal hysterectomy, the reason being uterine size greater than 12 weeks and traditional teaching favours the abdominal route in cases with uterine size more than 12-14 weeks.

Evidence demonstrates that vaginal hysterectomy has better outcomes when

compared with other approaches to hysterectomy and it has fewer postoperative complications, less intra-operative blood loss and quicker recovery. However it is not the choice when a large sized uterus is encountered and concomitant adnexal surgery is required [13,14]. Though abdominal hysterectomy carries higher complication rate, vaginal hysterectomy is not always feasible and laparoscopic approach is technically demanding and costly. Therefore, abdominal hysterectomy is preferred in most cases as seen in this study.

Out of 62.5% of patients who underwent total abdominal hysterectomy, 29.17% had associated bilateral oophorectomy and 10 % had unilateral oophorectomy. In a study conducted by Sucheta K *et al* [11]. 15% had bilateral oophorectomy and 21% had unilateral oophorectomy. Whether to preserve or remove the ovaries at the time of hysterectomy is a dilemma for decades. Because of the risk of residual ovary syndrome and cancer of ovary in patients with preserved ovaries, it is recommended that oophorectomy should be done in women over the age of 45 years and encouraged in postmenopausal women.

In the current study, the most common indications were abnormal uterine bleeding (36.25%) followed by fibroid uterus (34.58%). Study conducted by Panda S *et al* [15] showed 33.9% incidence of DUB in hysterectomy patients, followed by leiomyoma in 25.27% of cases. In contrast, Prasad *et al* [16]. showed 59.4% incidence of fibroid uterus, the next common indication was abnormal uterine bleeding (23.3%). Though hysterectomy is quite a safe and effective procedure, like any other major surgery it is associated with many complications, morbidity and mortality. The reason for hysterectomy should always be justified. Before opting for hysterectomy, alternate organ preserving options like myomectomy, embolization, endometrial

Utero-vaginal prolapse (29.16%) was the third most common indication for hysterectomy in our study population, the incidence of which can be reduced by preventive measures in reproductive age group. Hymavathi K *et al* [12] study showed that they had 21.17% of hysterectomies due to prolapse of uterus. Majority of hysterectomy procedures were performed to correct problems that interfered with normal functions and improved quality of life.

The most common complication encountered during hysterectomy in our study population was hemorrhage. 32 cases (13.33%) out of 240 cases required one or more pints of blood transfusion either intra-operatively or post-operatively. In literature various studies reported 1.3- 15% incidence of hemorrhagic complication in hysterectomy cases. The hemorrhagic complications mainly occurred in cases of dense adhesions due to severe endometriosis or previous surgeries and long standing utero-vaginal prolapse.

Post-operative wound infections occurred in 26 cases comprising 10.83% which is similar to Sucheta KL *et al* [11] study. Wound dehiscence was observed in 11 cases (4.58 %) which required resuturing of the wound. Febrile morbidity was observed in 10 cases (4.58%). 4 cases had bladder injury which was identified intra-operatively and immediately repaired. Bladder injury were in cases with previous history of caesarean section. Pelvic hematoma was seen in one case and one patient had antibiotic-induced colitis.

Conclusion

Though hysterectomy is quite a safe and effective procedure, like any other major surgery it is associated with many complications, morbidity and mortality. The reason for hysterectomy should always be justified. Before opting for hysterectomy, alternate organ-preserving options like myomectomy, embolization, endometrial

ablation and other medical treatments should be discussed with the patient. Route of hysterectomy should be decided on case to case basis.

Periodical clinical audit should be conducted in every institute to collect data, analyze the indications and understand the epidemiology of hysterectomies.

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