

A STUDY ON INDICATIONS, MODE OF HYSTERECTOMY AND HISTOPATHOLOGICAL ANALYSIS OF HYSTERECTOMY SPECIMENS

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ABSTRACT

Objectives: To study the age distribution, indications, modes of hysterectomy, concurrent surgery done along with hysterectomy, and histopathological analysis of hysterectomized specimens.

Methods: This study was conducted in the Department of Obstetrics and Gynecology, Medciti Institute of Medical Sciences, a tertiary teaching hospital at Medchal. Medical records of 240 cases of hysterectomy performed from January 2015 to December 2021 were retrieved from the Medical Record Department. The age distribution, indications of hysterectomy, mode of hysterectomy, concurrent oophorectomy, and histopathological reports of hysterectomy specimens were analyzed in this study.

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%. Common indications for hysterectomy were AUB (36.25%), fibroids (34.58%), and UV prolapse (29.16%). Abdominal hysterectomy (62.5%) was performed more commonly than vaginal hysterectomy (29.16%). Histopathological analysis showed the most common pathologies as atrophic endometrium, leiomyoma in the myometrium, and inflammation in the cervix. Concurrent bilateral oophorectomy was done in 51.66%, unilateral oophorectomy was done in 10%, and ovaries were conserved in 38.33%.

Conclusion: Hysterectomy is a common major gynecological surgery performed, most commonly in the perimenopausal age group. Although there is an increased trend toward the laparoscopic route, the abdominal route is still the preferred route. Leiomyoma is the most common pathology found in hysterectomized specimens. AUB being the most common indication for hysterectomy, there should be increased use of medical management, and patients should be counseled for conservative management in order to prevent increased surgical interventions.

Keywords: Hysterectomy, Abdominal, Age, Indications, Histopathology, Concurrent.

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INTRODUCTION

Hysterectomy is defined as the surgical removal of the uterus, which is the most commonly performed gynecological surgery in women after a cesarean section [1-3]. There are various indications for hysterectomy [4-7]. These include conditions like AUB, fibroids, adenomyosis, uterovaginal prolapse, endometriosis, ovarian tumors both benign and malignant, chronic pelvic pain, obstetric conditions like uncontrolled postpartum hemorrhage leading to cesarean hysterectomy, rupture of the uterus, molar pregnancy, and cervical causes like cervical carcinoma.

Although there is tremendous improvement in conservative management with drugs that include non-steroidal anti-inflammatory drugs, antifibrinolytic agents, gonadotropin-releasing hormone analogs, selective estrogen receptor modulators, Mirena (a hormonal intrauterine contraceptive device), minimally invasive surgeries such as dilatation and curettage, ablation techniques, and conservative surgeries like myomectomy, hysterectomy is still the preferred treatment option, especially for women who have completed their families, as it gives better and faster symptom relief to patients.

Hysterectomies can be performed by various routes, like abdominal, vaginal, total laparoscopy, and laparoscopic-assisted vaginal routes [8]. Various concurrent surgeries can be performed along with hysterectomy, like oophorectomy, appendectomy, cholecystectomy, etc. This is done to prevent ovarian cancer and to reduce further need for surgery for benign and malignant conditions of the ovary. The appropriate age for the prophylactic oophorectomy in both women

who are at increased risk and who are not at increased risk is not yet determined.

METHODS

This is a cross-sectional study done at the Medciti Institute of Medical Sciences, which is a rural tertiary teaching hospital located in Medchal, Telangana state, India.

All the hysterectomies done in a span of 7 years, from January 2015 to December 2021, are taken into this study. Case records of both emergency and elective hysterectomies were collected from the medical record department. Data regarding age, parity, indications, complaints, and mode of hysterectomy were collected from the records. Post-surgery specimens were sent for histopathological analysis, and the reports were collected from the pathology department.

Ethical clearance is taken from the institutional ethics committee, and data are entered in Microsoft Excel sheets and analyzed by percentages.

RESULTS AND DISCUSSION

In 7 years, 240 hysterectomies were done. Among these, 236 were performed for gynecological indications, and 4 were for obstetric indications.

Table 1 shows the age distribution of cases who underwent hysterectomy. Among 240 cases, 3.33% of cases (8 women) were in age group <30 years, 12.5% of cases (30 women) were in age group 30–39 years, 51.25% of cases (123 women) were in age group 40–49 years, which is

the most common age group undergoing hysterectomy, 19.5% of cases (47 women) were in age group 50–59 years, being the second-most common age group for hysterectomy, 8.75% of cases (21 women) were in age group 60–69 years, and 4.58% of cases (11 women) were >70 years.

Table 2 shows the indications for hysterectomy, whereby AUB is the most common indication for hysterectomy, which includes 36.25% (87 cases), followed by fibroids, i.e., 34.58% (83 cases), uterovaginal prolapse, i.e., 29.16% (70 cases), ovarian pathology 6.66% (16 cases), pelvic inflammatory disease 5% (12 cases), post-menopausal bleeding 5% (12 cases), adenomyosis 2.08% (5 cases), pregnancy related 1.66% (4 cases), and CIN 0.41% (1 case).

Table 3 shows the distribution of routes for hysterectomies. In our study, 62.5% (150 cases) underwent a total abdominal hysterectomy, which is the most common route, followed by vaginal hysterectomy, which is the second-most common route, i.e., 29.16% (70 cases), followed by LAVH 5% (12 cases), TLH 1.66% (4 cases), and cesarean hysterectomy 1.66% (4 cases).

Table 4 shows the histopathological analysis of endometrium, where the reports of the specimens were as follows: 50.41% (121 cases) were

in the proliferative phase, 21.25% (51 cases) were in the secretory phase, 19.16% (46 cases) were atrophic endometrium, 3.75% (9 cases) showed simple hyperplasia, 3.33% (8 cases) showed complex hyperplasia, 1.66% (4 cases) showed placental tissue, and 0.41% (1 case) showed endometrial polyp.

Table 5 shows the histopathological analysis of the myometrium of the uterus. In our study, 45.41% (109 cases) had normal endometrium; the most common pathology seen was leiomyoma, which includes 39.58% (95 cases); the second-most common pathology was adenomyosis, 7.5% (18 cases); followed by monckeberg sclerosis, seen in 5% (12 cases); adenomyosis with leiomyoma, seen in 1.25% (3cases); and placental tissue, seen in 1.25% (3 cases).

Table 6 shows the histopathological analysis of the cervix. Table shows normal cervix in 14.58% (35 cases), non-specific cervicitis in 68.75% (165 cases), atrophic cervix in 12.08% (29 cases), dysplasia in 1.66% (4 cases), papillary endocervicitis in 1.66% (4 cases), and Nabothian cysts in 1.25% (3 cases).

Table 7 shows concurrent oophorectomy, where bilateral oophorectomy was done in 51.66% of cases (124 cases), unilateral oophorectomy was done in 10% of cases (24 cases), and ovaries were conserved in 38.33% of cases (92 cases).

Table 1: The age distribution of cases who underwent hysterectomy

Age (years)	Number of cases (%)
<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: Indications for hysterectomy

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

PMB: Post-menopausal bleeding, PID: Pelvic inflammatory disease

Table 3: The distribution of route of hysterectomies

Types of hysterectomy	Number of cases (%)
TAH	150 (62.5)
VH	70 (29.16)
LAVH	12 (5)
TLH	4 (1.66)
Cesarean hysterectomy	4 (1.66)

Table 4: Histopathological analysis of endometrium

Endometrium	Number of cases (n)
Proliferative phase	121 (50.41)
Secretory phase	51 (21.25)
Atrophic	46 (19.16)
Simple hyperplasia	9 (3.75)
Complex hyperplasia	8 (3.33)
Endometrial polyp	1 (0.41)
Placental tissue	4 (1.66)

Hysterectomy is the most common major gynecological surgery in India and even worldwide. The most common age group who underwent hysterectomy in this study was between 40 and 49 years, which is about 51.25% of the study population, which is similar to the study of Suraneni *et al.* [9], where 56.7% were in the age group of 41–50 years. Our study also relates to the study by Sucheta *et al.* [10], where the most common age group who underwent hysterectomy was between 41 and 50 years, with 50% of the study population. The above 3 studies show that the most common age group undergoing hysterectomy is 41–50 years, which means problems with AUB and fibroids are most seen in the perimenopausal age group, and also these groups opt for hysterectomy as they have completed their families, and this treatment has better symptom relief compared to conservative methods.

Table 5: Histopathological analysis of myometrium of uterus

Myometrium	Number of cases (%)
Normal	109 (45.41)
Leiomyoma	95 (39.58)
Adenomyosis	18 (7.5)
Monckeberg sclerosis	12 (5)
Adenomyosis+leiomyoma	3 (1.25)
Placental tissue	3 (1.25)

Table 6: Histopathological analysis of cervix

Cervix	Number of cases (%)
Normal	35 (14.58)
Chronic non-specific cervicitis	165 (68.75)
Atrophic	29 (12.08)
Dysplasia	4 (1.66)
Papillary endocervicitis	4 (1.66)
Nabothian CYST	3 (1.25)

Table 7: Concurrent oophorectomies

	Number of cases (%)
B/L oophorectomy	124 (51.66)
U/L oophorectomy	24 (10)
Ovaries conserved	92 (38.33)

In our study, the most common indication for hysterectomy is AUB (36.25%), followed by fibroids (34.58%). This correlates with the study of Panda *et al.* [11], where the most common indication for hysterectomy was AUB (33.9%), followed by leiomyoma (25.27%). The study done by Hymavathi *et al.* [12] showed the most common indication as AUB (51%), followed by uterine prolapse (21.17%), whereas in our study, uterovaginal prolapse constitutes 29.16% and is the 3rd most common indication for hysterectomy in our study.

The most common route of hysterectomy in our study is abdominal, which accounts for 62.5% of the study population, followed by vaginal hysterectomy (29.16%), laparoscopic-assisted vaginal hysterectomy (5%), total laparoscopic hysterectomy (1.66%), and cesarean hysterectomy (1.66%) of the study group. The result of our study correlates with the study of Sucheta *et al.* [10], where the most common route was abdominal, i.e., 63%, and also in the study by Zaman and Begum [13], where 65.93% of the study group underwent a total abdominal hysterectomy, followed by vaginal hysterectomy in 32.22%, which is similar to our study. Hence, total abdominal hysterectomy is the most preferred route of hysterectomy because it is cost-effective and does not require any special equipment or training as needed by laparoscopic procedures. It is more common compared to the vaginal route, as AUB and fibroids are the most common indications, and these need an abdominal approach. Laparoscopic surgeries are also increasingly used in the present era.

The hysterectomy specimens that were sent for histopathological analysis showed endometrial pathologies such as atrophic endometrium in 19.16%, endometrial hyperplasia, both simple and complex, in 7%, and endometrial polyps in 0.41%. This is similar to the study of Subrata *et al.* [14], in whose study endometrium was atrophic in 17.26%, hyperplastic in 8.95%, and polyp was seen in 4.95%. In the Ranabhat *et al.* [15] study, endometrial hyperplasia was seen in 16% of the study group.

In our study, the most common myometrial pathology was leiomyoma (39.58%), followed by adenomyosis (7.5%). This is comparable to the study by Manandhar *et al.* [16], where leiomyoma included 54.43% the study by Rehman *et al.* [17] showed leiomyoma in 42% of his study group; and the study by Subrata *et al.* [14] had leiomyoma in 32% of the study group. The most common histopathological analysis of our study correlates with the most common indications (AUB, fibroids) of our study.

Cervix, which was sent for histopathology, showed non-specific cervicitis in 68.75%; similar results were seen in a study by Mahajan *et al.* [18], where an inflammatory cervix was seen in 58.1%.

CONCLUSION

A hysterectomy is one of the most commonly performed major gynecological surgeries in India. The perimenopausal age group is the most involved age group who are undergoing hysterectomy. AUB is the most common indication for a hysterectomy. Abdominal hysterectomy is the most common route of approach for hysterectomy, though there is an increased rate of laparoscopic approach. It still has a few limitations, like skill and equipment. The histopathological analysis shows that atrophic endometrium is the most common endometrial pathology, leiomyoma is the most common myometrial pathology, and non-specific cervicitis is the most common cervical pathology seen in the hysterectomized specimens.

AUTHORS CONTRIBUTION

Lakshmi Priyanka K: Data Collection, original draft preparation. Tella Srivani: Data Collection, Original Draft Preparation. Ke manga Reddy: supervision, formal analysis, review, and editing of the manuscript.

CONFLICTS OF INTEREST

The author confirms no conflict of interest.

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