

## To Study the Trends in Hysterectomy in a Tertiary Care Hospital Based On the Indications of Hysterectomy

Dr.PM.Rekha Rao<sup>1</sup>, Dr.Dumpala Vijayalakshmi<sup>2</sup>, Dr.D.Shankar Reddy<sup>3</sup>

1- Assistant Professor, 2- Senior Resident, Dept of Gynaecology and Obstetrics, 3- Associate Professor in Community Professor, Government Medical College, Kadapa.

Corresponding Author: Dr.PM.Rekha Rao

### Abstract:

**Background:** The Centres for Disease Control and Prevention reported that the hysterectomy rate in 2000–2004 was 5.4 per 1000 women per year. Types of Hysterectomies include Abdominal hysterectomy (AH), Vaginal Hysterectomy (VH), Laparoscopic hysterectomy and Robotic hysterectomies. These procedures have undergone important changes recently. Abdominal hysterectomy is carried out in cases of gynaecological disorders like Abnormal Uterine Bleeding (AUB), Fibroids, endometriosis, and in malignancies.

**Materials and Methods:** In this study, 150 cases of hysterectomy were analysed from April 2016 to August 2017 at RIMS, Kadapa.

**Results:** Fibroid uterus (54.5%) is the most common indication for hysterectomy in abdominal hysterectomy patients. Fibroid uterus (50%) is the most common indication for hysterectomy NDVH patients.

**Keywords:** Hysterectomy, Abdominal hysterectomy, Laparoscopic hysterectomy, Kadapa

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### I. Introduction

Hysterectomy is the most frequently performed major gynaecologic surgical procedure<sup>1,2</sup>. The overall rate of hysterectomy in Germany in 2005–2006 was 362.9(295.0 for benign diseases of the genital tract and 44.0 for primary malignant tumours of the genital tract) per 100 000 women per year<sup>3</sup>. The Centres for Disease Control and Prevention reported that the hysterectomy rate in 2000–2004 was 5.4 per 1000 women per year<sup>4</sup>.

Types of Hysterectomies include Abdominal hysterectomy (AH), Vaginal Hysterectomy (VH), Laparoscopic hysterectomy and Robotic hysterectomies. These procedures have undergone important changes recently. Abdominal hysterectomy is carried out in cases of gynaecological disorders like Abnormal Uterine Bleeding (AUB), Fibroids, endometriosis, and in malignancies. Vaginal hysterectomy which is considered to be less invasive than abdominal hysterectomy is usually indicated in gynaecological disorders for prolapsed uterus. But now vast worldwide literature has demonstrated its applicability in other common benign disorders with no uterovaginal descent like uterine leiomyoma, adenomyosis, abnormal uterine bleeding – a term referred to as NON DESCENT VAGINAL HYSTERECTOMY in non-prolapsed uterus: no scar hysterectomy.

There are very few studies performed where a correlation between histopathological examination of the uterus and the clinical profile of the patient undergoing hysterectomy has been attempted. The present study is undertaken to study Trends in Hysterectomy in a tertiary care hospital based on the indications of hysterectomy.

### II. Materials And Methods

Name, Age, Address, Occupation, Socioeconomic status, date of admission, chief complaints, detailed history regarding menstrual history were collected. History of any discharge per vaginum, quantity, colour, odour, details about bladder complaints like frequency, burning micturition, stress incontinence, dysuria, bowel complaints, if any complaints of mass per abdomen were present, details regarding its duration, onset, shape, size, colour, tenderness, distension of abdomen, variation in size, mass per vagina, fever, loss of weight, loss of appetite, chronic cough, backache, history of taking treatment for any previous ailment were observed. Complete examination, history, indication, type of hysterectomy, per operative findings, per operative complications, post-operative events is taken from all the eligible patients.

Regarding her obstetric history, age of marriage, duration, mode of delivery so as to know whether they were conducted at home or hospital, conducted by trained or untrained dais, duration of second stage labour, post-natal period events, history of sterilisation, duration since last delivery were noted.

Menstrual history details like age of menarche, regularity of cycles, history of passage of clots and number of pads per day to roughly assess excessive flow, last menstrual periods details were observed.

Any complaints of hypertension, diabetes, Tuberculosis, venereal disease, any previous operative procedures, if so nature of surgery and anaesthesia, if any previous blood transfusion, history of any genital or breast malignancy, among patient's sisters, mother, maternal aunts were also collected.

Detailed general and systemic examination were noted. On abdominal examination any palpable mass, organomegaly, tenderness, ascites, position of umbilicus, any engorged veins and hernial sites were noted.

Local examination of external genitalia, tests for incontinence, per speculum examination findings, status of vagina and cervix, descent of uterus and any discharge per vagina, position and mobility of uterus, forniceal status and recto vaginal examination were analysed in detail.

After the clinical diagnosis, pap smear, dilatation and curettage reports and the following investigations were studied in detail.

1. Haemoglobin
2. Blood grouping & Rh typing
3. Bleeding time & clotting time
4. Erythrocyte sedimentation rate
5. Blood sugar level
6. Blood urea
7. Serum creatinine
8. Urine examination for bile salts, bile pigments, albumin and sugar
9. Chest X-ray
10. ECG
11. Ultrasonography of abdomen and pelvis

Details of any medical pre anaesthetic check-up, preparation of patient for hysterectomy, preoperative antibiotics, operative notes showing the date of operation, indication, type of hysterectomy, per operative findings, per operative complications, post-operative events and histopathological reports, advice at discharge, follow up at OPD level were analysed.

**Inclusion criteria:** All cases who underwent hysterectomy in RIMS, Kadapa during the study period.

**Exclusion criteria:** 1. Those who do not give consent. 2. Caesarian Hysterectomy.

Case sheets of 150 women who have undergone Abdominal, vaginal or laparoscopic hysterectomy were analysed in detail for the following information.

**Sample size:** In this study, 150 cases of hysterectomy were analysed from April 2016 to August 2017 at RIMS, Kadapa. All cases which met the inclusion and exclusion criteria were selected for the study.

Institutional ethical clearance was taken for the study.

### III. Results

150 cases of hysterectomy were analysed from April 2016 to August 2017 at RIMS, Kadapa.

**Table-1:** Age Distribution

Age	Number	Percentage
30-40	60	40%
41-50	69	46%
51-60	17	11.3%
>60	4	2.67%
Total 150		

Depending on the age, patients were divided into 4 groups as 30-40, 41-50, 51-60, and >60 years. It is observed that those women belonging to age group of 41-50 have undergone maximum number of hysterectomies and least in the age group of more than 60 Years. In the present study, 46% of hysterectomies were in the age group of 41-50 Years reflecting the general trend in hysterectomy.

**Table 2:-** Parity Distribution

Parity	No.	%
Nulligravida	10	6.67%
Primipara	5	3.33%
Para 2	60	40%
Para 3	42	28%
Para 4	21	14%
≥ Para 5	12	8%
Total	150	

The observations regarding parity were divided into 6 groups depending on their parity. It is noticed that maximum number of hysterectomies were performed in women who were para 2 and least in primi parous women.

**Table 3:- Clinical Presentations**

Complaints	No.	PERCENTAGE
Heavy menstrual bleeding	85	54.49%
Discharge per vagina	7	4.49%
Mass per vagina	37	23.72%
Mass per abdomen	15	9.62%
Post-menopausal bleeding	3	1.92%
Dysmenorrhoea	9	5.77%

Patients had presented with more than one complaint. All the complaints were considered. As tabulated, maximum number of patients had complaints of abnormal menstrual flow (55%), followed by mass per vagina(24%).

**Table 4: - Clinical Diagnosis**

S. No.	Clinical Diagnosis	No.	Percentage
1.	Fibroid uterus	46	31%
2.	Prolapse	44	29.3%
3.	Adenomyosis	15	10%
4.	Endometrial causes	15	10%
5.	Endometrial polyp	4	2.6%
6.	DUB	11	7.3%
7.	PID	7	4.6%
8.	CIN	1	0.6%
9.	Ovarian cyst	4	2.6%
10.	Postmenopausal bleeding	3	2%
	Total	150	

Regarding the indications for hysterectomies, separate observations were made for abdominal, vaginal and laparoscopic approach. It is noted that maximum number of Vaginal hysterectomies were done for Prolapse uterus, maximum number of abdominal hysterectomies were done for fibroid uterus, laparoscopic approach was for fibroid uterus and DUB.

**Table 5: - Types of hysterectomy**

S.No	Type of hysterectomy	No.	Percentage
1.	Total abdominal hysterectomy with bilateral salpingoophorectomy	47	31.3%
2	Non-descent vaginal hysterectomy	10	6.66%
3	Vaginal hysterectomy with pelvic floor repair	44	29.3%
4.	Laparoscopic assisted vaginal hysterectomy	35	23.3%
5.	Total abdominal hysterectomy with unilateral salpingoophorectomy	8	5.3%
6.	Laparoscopic assisted vaginal hysterectomy with unilateral salpingoohorectmy	6	4%
	Total	150	

It is observed that maximum number of hysterectomies were performed are by abdominal route. TAH WITH BSO (31.3%) followed by vaginal hysterectomy with pelvic floor repair in 29.3% cases.29.3% cases underwent non-descent vaginal hysterectomy. 41 cases underwent laparoscopic assisted vaginal hysterectomy, out of which 6 cases had salpingoophorectomy at the time of procedure.

**Table 6:- Comparison of Various Indications with Surgical approach**

S.no	Diagnosis	Abdominal hysterectomy(n=55)	NDVH(n=10)	Laparoscopic hysterectomy(n=41)
1	Fibroid uterus	30(54.5%)	5(50%)	11(26.82%)
2	DUB	1(1.8%)	2(20%)	8(19.51%)
3	PID	1(1.8%)	-	6(14.6%)
4	Adenomyosis	8(14.5%)	1(10%)	6(14.6%)
5	Endometrial causes	4(7.27%)	2(20%)	9(21.9%)
6	Polyp	3(5.45%)	-	1(2.43%)
	Post menopausal bleeding	3(5.45%)	-	-
7	Ovarian cyst	3(5.45%)	-	-
8.	CIN	1(1.8%)	-	-
9.	Prolapse	-	44(VH+PFR)	-

Fibroid uterus (54.5%) is the most common indication for hysterectomy in abdominal hysterectomy patients. Fibroid uterus (50%) is the most common indication for hysterectomy NDVH patients. Fibroid uterus (26.8%) is the most common indication for hysterectomy in laproscopic hysterectomy patients.

#### **IV. Discussion**

This study was a prospective study conducted at Rajiv Gandhi Institute of Medical Sciences and research, Kadapa, YSR District, which involved one hundred and fifty patients.

In this study, it is observed that maximum number of hysterectomies were performed in women between the age of 31-50 yrs(86%),among which it was common among 41-50 yrs. (46%).This is similar with other studies. Yogesh neena<sup>5</sup> et al in 2013 reported 54% in the age group 45-55 yrs. Aruna Devi<sup>6</sup> et al in 2014, in their study showed that 46% hysterectomies were performed in age 40-49 years, which is the most common age group, 22.5% of women were in age group of 30-39 years & 16.5% were 50-59 years.

In this study, majority of the patients were multiparous i.e., para 2 and para 3. This was well compared with other studies done by Reddy et al<sup>7</sup>, David-Montifiere et al<sup>8</sup>, Francesco sest<sup>9</sup> et al. Watts et al<sup>10</sup>, in 1956 has reported higher incidence of 75.7% in parous women and lowest in nulliparous women (23.7%). Dickers<sup>11</sup> et.al in 1982 has reported higher incidence in parous women (90.3%) and nulliparous was only 9.7%. All the nulliparous women who underwent hysterectomy were above 38-40 years in the present study. This study reported that, higher incidence in multipara, which was 90% and least in grand multipara which was 8%.

So, from these studies we can conclude that, although the number of nulliparous women is less among women who have undergone hysterectomy, they are not altogether immune to conditions requiring hysterectomy and parity is not definitive in deciding whether patient requires hysterectomy or not.

The commonest complaint during this study period was heavy menstrual bleeding 54.49%. Emil.F.Cava<sup>12</sup> in 1975, have reported abnormal menstrual flow to be the commonest symptom by giving the following rates 35.7%. The next common complaint in this study is mass per vaginum, 23.7%. Watts et al<sup>10</sup> in 1956 has given only 12.5%, Emil.F.Cava<sup>12</sup> in 1975 gave 37.9%. In this study, postmenopausal bleeding as a symptom was given by 3 women (1.92%) which is in comparison to 1.8% in Watts<sup>10</sup>.

All the cases of AUB were classified according to PALMCOEIN classification. Fibroid uterus (31%) is the most common indication for hysterectomy in this study in comparison to Dickers<sup>11</sup> et al in 1982 is 47.4% and Deeksha Pandey<sup>13</sup> et al in 2013 observed fibroid uterus as indication in 39.9% cases which is similar to the present study. In this study, Uterine prolapse 44 (29.3%) was the common indication for Vaginal hysterectomy, abdominal hysterectomy was not performed in those cases.

Aruna devi<sup>6</sup> et.al in 2015, UV prolapse was found in 29.5% cases which is similar to the present study. Deeksha pandey<sup>13</sup> et.al in 2012 has reported 16.3% cases of UV prolapse as an the indication for hysterectomy. It was observed that DUB was the indication for hysterectomy in 7.3% in the present study.

In this study most of the hysterectomies were performed by abdominal approach. In the present study, 55(37%) cases were subjected to abdominal hysterectomy,10 cases were subjected to nondescent vaginal hysterectomy, 44 cases were performed by vaginal hysterectomy with pelvic floor repair and 41(27.3%) cases were performed by laparoscopic hysterectomy. Most of the hysterectomies were performed as an elective procedure.

Watts<sup>10</sup> et al reported that 75% cases were subjected to abdominal hysterectomy and 25% subjected to vaginal surgery. Similar reports are given by Amrika<sup>14</sup> et al, Brandfass<sup>15</sup> in 1968, Dickers<sup>11</sup> et al., that abdominal approach outnumbered the vaginal route.

Lindsay<sup>16</sup> et al had conducted retrospective study on trends in hysterectomy for over a period of 10 years from 2000-2010. They have concluded that, there were 13,973 patients included who underwent hysterectomy at Magee-Womens Hospital. In 2000, 3.3% were laparoscopic (LH), 74.5% abdominal (AH), and 22.2% vaginal (VH). By 2010, LH represented 43.5%, AH 36.3%, VH 17.2%, and 3.0% laparoscopic converted to open (LH→AH).

A total of 602 hysterectomies were performed: 51 (8.5%) laparoscopic, 203 (33.7%) vaginal, and 348 (57.8%) abdominal. The lowest complication rate occurred in patients who underwent laparoscopic hysterectomy (n=5, 9.8%) and the highest--abdominal hysterectomy (n=88, 25.2%).

Deeksha pandey<sup>13</sup> et al in 2012, reported common surgical approach was abdominal (74.7%), followed by vaginal (17.8%), and laparoscopic (6.6%) cases. Aruna devi<sup>6</sup> et al in 2014 compared various routes of hysterectomies and reported; abdominal approach (64%) with vaginal (22%) and laparoscopic (14%) approach in their study.

There was no mortality observed in the study.

## V. Conclusion

In this study most of the hysterectomies were performed by abdominal approach. In the present study, 55(37%) cases were subjected to abdominal hysterectomy, 10 cases were subjected to nondescent vaginal hysterectomy, 44 cases were performed by vaginal hysterectomy with pelvic floor repair and 41(27.3%) cases were performed by laparoscopic hysterectomy. Most of the hysterectomies were performed as an elective procedure

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