

A COMPARATIVE STUDY ON PREDISPOSING FACTORS AND SAFETY SURGICAL PROCEDURES OF HYSTERECTOMY IN URBAN AND RURAL WOMAN OF WARANGAL DISTRICT

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ABSTRACT

Aim: To know the indication and safety procedure of hysterectomy in urban & rural women of Warangal district.

Objectives:

- To analyze the relation between predisposing factors and hysterectomy with the help of a survey.
- To bring awareness on predisposing factors that leads to hysterectomy by changing their life style modifications.
- To know the safe and effective surgical procedures of hysterectomies
- To know the percentage of hysterectomies in urban and rural areas.

Methodology: A Suitably designed Data collection form was prepared for patients which includes demographic details of the patient such as age, gender, weight, status, occupation, reason for admission, laboratory data of hematology, biochemistry, USG of uterus, type of surgery, indication for surgery, medication chart, follow up. Statistical analysis was performed by using mean Paired T- test and single factor –ANOVA test are used in the study for probability estimation mean is also used to estimate the safe surgical procedures for hysterectomy and major indications for hysterectomy. **Results:** In our study 150 patient who underwent Hysterectomy, were enrolled in which 81 urban and 69 rural with various predisposition factors and various surgical procedures as subjects. The role of predisposing factors, severity of indications, USG impression and cost effectively helps the physician to make the decision for type of hysterectomy to be conducted. The majority of the patients are reported from urban residence are at 54% and rural are at 46%. In 150 patients, 150 (100%) were married and 0 (0%) were unmarried. working women were 23(15.3%) and housewife were 127(84.7%). The maximum numbers of patients are between the age group of 40-49 years. In 150 patients, patients with AUB were 36(24%), Uterine Fibroid were 66(44%), Uterine Prolapse were 13(8.66%), Adenomyosis were 29(19.3%) and Endometriosis 6(4%). The patient demographic details and mild complications were collected after the surgery until the patient was discharged. In 150 patients, TLH was done for 93, AH was done for 37 and VH was done for 20. The maximum type of surgery is TLH (62%), AH (25%) and VH (13%). The significance of surgical procedure was compared with each other at p=0.05. TLH (p=0.118512), AH (0.131877), VH (p=0.14792) there is a significance difference between the type of surgical procedures. TLH is more significant followed by AH and VH. TLH is safer followed by AH and VH as the average of the total is least i.e., 1.612903±0.084365, 4.05405±0.13373 and 7.5±0.109746 respectively. Bleeding is the least complication followed by blood in urine, raise in temperature, abdominal pain. **CONCLUSION:** our study subjects, the family history, obesity, stress, menopausal stage and diet habits are found to be predisposing factors for development of indications like adenomyosis, endometriosis, uterine fibroid, uterine prolapse, abnormal uterine bleeding which are responsible for conducting hysterectomy. Urban woman is more prone with above mentioned complications thus underwent hysterectomy. Uterine fibroid is the most common indication for hysterectomy, TLH is the safe and effective procedure for hysterectomy when compared with vaginal and abdominal hysterectomy.

KEYWORD: Adenomyosis, endometriosis, uterine fibroid, uterine prolapsed, AUB, TLH.

INTRODUCTION

A hysterectomy is an operation to remove your womb (uterus). After the operation you will no longer be able to

have children. If you have not yet gone through the menopause, you will no longer have periods. A hysterectomy is used to treat conditions that affect the female reproductive system, such as heavy periods

(menorrhagia), chronic (long-term) pelvic pain, non-cancerous tumours (fibroids) and cancer of the ovaries, womb, cervix or fallopian tubes. A hysterectomy is a major operation with a long recovery time. It is usually only considered after alternative; less invasive treatments have been tried. The term hysterectomy originates from two Greek words: “hystero” which means uterus and “ectomy” which means resection removal from the human body. Hysterectomy is either total or subtotal, with or without the adnexa and depended on the way it is performed. It is the second most common surgery among the women around the world.

A woman may have a hysterectomy for different reasons, including: **Uterine fibroid:** Uterine fibroid is a non-cancerous tumour from smooth muscle that originates from smooth muscle layer of the uterus. **Uterine prolapse:** Uterine prolapse is a form of female genital prolapsed which means the uterus has descended from its normal position in the pelvic farther down into the vagina. **Endometriosis:** Endometriosis is a medical condition in which the functional endometrium that grows inside uterus is present in site of other than uterus. **Cancer of the uterus, cervix, and ovaries:** Cancer is a malignant tumour deriving from cells of the uterus, cervix ovaries. **Vaginal bleeding:** Abnormal uterine bleeding [AUB] includes following Conditions. **Menorrhagia:** A heavy or prolonged uterine bleeding that occurs at regular intervals. **Metrorrhagia:** Irregular menstrual bleeding or bleeding between periods. **Polymenorrhea:** Frequent menstrual bleeding. **Dysfunctional uterine bleeding:** DUB is a condition that causes vaginal bleeding to occurs outside of the regular menstrual cycle. **Adenomyosis:** A condition in which endometrial tissue exists within and grows into the uterine wall.

The type of procedure chosen depends on the patient's condition and how much of their womb and surrounding structures needed to removed and how much surgeon is trying to leave in place. The main types of hysterectomy include **Subtotal Hysterectomy:** Removal of uterine body only, **Total Hysterectomy:** Removal of uterine body and cervix (not ovaries), **Hysterectomy With bilateral salpingo-oophorectomy:** Removal of uterus and fallopian tubes, **Radical Hysterectomy:** Total Hysterectomy with pelvic lymph nodes, per cervical tissues and upper ½ Vagina, **Partial Hysterectomy:** Removal of 2/3 of uterus.

The different approaches are performed for hysterectomies. In Warangal district the approaches are Abdominal Hysterectomy, Vaginal Hysterectomy and Laparoscopic Hysterectomy. We reported the complications that occurred due to the hysterectomy techniques and the effectiveness of the techniques was compared.

METHODOLOGY

The present study was conducted at **Laxmi Narasimha**

Hospital, Hanamkonda. This centre is situated in the heart of the city with basic objectives of providing Pharmacological and non-pharmacological management of Gynaecologic Diseases. A hospital based Ambispective (Retro-prospective) control Study. This study was carried out for 6 months (October – March) 2019-2020. The study was conducted on 150 patients.

It Inclusion Patients who are suffering with Abnormal uterine bleeding, Patients who are infertile, Female who are above puberty, Female who are obese, Female who attained postmenopausal stage, both married and unmarried women, Patient with bilateral salpingectomy surgery, the exclusion criteria were Female patients below puberty (<10-11years), Female who are suffering from cancers, the patients who are meeting the study criteria will be enrolled in to the study. The following information will be collected, patient demographics (age, gender and weight), medical history, social history and diagnostic data of factors responsible for hysterectomy. Follow-up will be conducted for next clinic visits. The source of data is from Patients, patient case reports, prescriptions and physician, patient relatives, Lab data, the statistical analysis was performed by Paired T- test and single factor –ANOVAs test are used in the study for probability estimation, mean is also used to estimate the safe surgical procedures for hysterectomy and major indications for hysterectomy.

RESULTS

In our study 150 patient who underwent Hysterectomy, were enrolled in which 81 urban and 69 rural with various predisposition factors and various surgical procedures as subjects. The role of predisposing factors, severity of indications, USG impression, cost effectively helps the physician to make the decision for type of hysterectomy to be conducted.

Epidemiological study

Table 1: Area wise distribution.

Area	No. Of people	Percentage (%)
Urban	81	54
Rural	69	46
Total	150	100

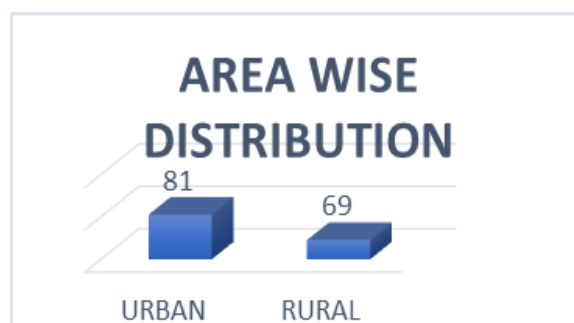


Figure 1: Area wise distribution.

Table-1 and figure-1 illustrates that the majority of the patients are reported from urban residence are at 54%

and rural are at 46%.

In 150 patients, 150 (100%) were married and 0 (0%) were unmarried. In 150 patients, working women were 23(15.3%) and housewife were 127(84.7%)

Table 2: Marital status of the patient.

STATUS	n
Married	150
Unmarried	0
Total	150

Table 3: Occupational distribution of the patients.

Occupation	Working	Housewife
n	23	127

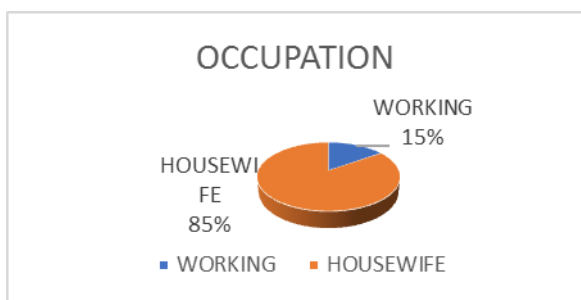


Figure 2: Occupational distribution of the patients.

Age Wise Distribution of Patients

The histogram illustrates that the maximum number of patients are between the age group of 40-49 years.

Table 4: Age wise distribution of patients.

Age group	No. of patients
20-29	4
30-39	47
40-49	79
50-59	11
60-69	6
70-80	3
Grand Total	150



Figure 3: Age wise distribution of patients.

Indications: In 150 patients, patients with AUB were 36(24%), Uterine Fibroid were 66(44%), Uterine Prolapses were 13(8.66%), Adenomyosis were 29(19.3%) and Endometriosis 6(4%).

Table 5: Indications for hysterectomy.

Indications	n	Percentage (%)
Aub	36	24
Uterine fibroid	66	44
Uterine prolapse	13	8.66
Adenomyosis	29	19.3
Endometriosis	6	4

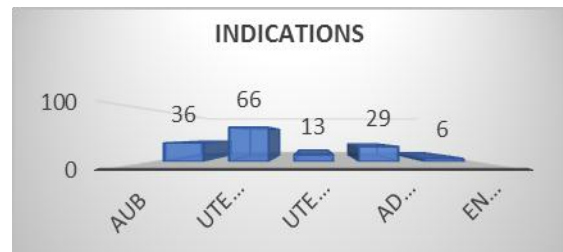


Figure 4: Indications for hysterectomy.

The histogram illustrates that maximum indication for hysterectomy is Uterine fibroid (44%) followed by AUB (24%), Adenomyosis (19.3%), Uterine Prolapse (8.66%) and the least is Endometriosis (4%).

Comparing The Type of Hysterectomies

The patient demographic details and mild complications were collected after the surgery until the patient was discharged.

In 150 patients, TLH was done for 93, AH was done for 37 and VH was done for 20.

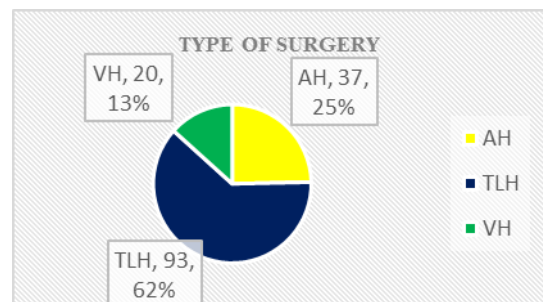


Figure 5: Percentage of Type of Hysterectomy.

Table 6: List of type of hysterectomy done.

TYPE OF HYSTERECTOMY	n
TLH	93
AH	37
VH	20
TOTAL	150

The pie chart illustrates the percentage of the hysterectomy that the maximum type of surgery is TLH (62%), AH (25%) and VH (13%).

Assessment of the efficacy of the different hysterectomy by using paired T-test

In our study the different type of surgical procedures of hysterectomy is done. The significance of surgical procedure was compared with each other.

Table 7: comparison between types of hysterectomy.

HYSTERECTOMY	SIGNIFICANCE (P=0.05)
TLH	0.118512
AH	0.131877
VH	0.147923

The above table shows that there is a significance difference between the types of surgical procedures. TLH is more significant followed by AH and VH.

Safety Measures

In our study the mild adverse effect was collected and

Table 9: Comparison of safety between type of hysterectomy.

COMPLICATION	TLH (P=0.05)	AH (P=0.05)	VH (P=0.05)
BLEEDING	0±0.084365	2±0.133723	2±0.109746
RAISE IN TEMPERATURE	1.190476±0.084365	8.333333±0.13373	25±0.109746
ABDOMINAL PAIN	2.727273±0.084365	1.875±0.133723	10±0.109746
BLOOD IN URINE	5.333333±0.084365	3.2±0.133723	2±0.109746
NILL	1.258621±0.084365	7.3±0.133723	14.6±0.109746
TOTAL	1.612903±0.084365	4.054054±0.13373	7.5±0.109746

The table-8 shows that the bleeding is the least complication followed by blood in urine, raise in temperature, abdominal pain.

TLH is safer followed by AH and VH as the average of the total is least i.e., 1.612903±0.084365, 4.05405±0.13373 and 7.5±0.109746 respectively

DISCUSSION

Hysterectomy is one of the most frequently performed major surgical procedure in women after caesarean delivery. Traditionally the uterus has been removed either by abdominal or vaginal route and gynaecologist in developed country started opting for laparoscopic hysterectomy in place of abdominal hysterectomy, new approaches like total laparoscopic hysterectomy and robotic assisted hysterectomy have also emerged in recent days.

Life brings many physiological, anatomical and psychological changes in life of women, due to family & society problems brings differences in the normal functioning of different systems in the body, all this changes effects menstrual cycle of women, which slowly leads to several gynaecological problems like vaginal infections, PCOS, ovarian cyst, fibroids, menstrual disorders, endometriosis, adenomyosis. The present study was conducted to evaluate the effect of predisposing factors and safety of surgical procedures of hysterectomy and USG parameters of urban and rural patients of Warangal district. The study was conducted for about 6 months duration of time. Our study results are comparable with other studies done in other parts of the world.

Our study results are comparable with study conducted by Fangfang Liu reported that the overall prevalence of hysterectomy was 3.31% (110/3328). Women above the age of 40 years had a higher prevalence of prior

compared between and the within the groups. The below table shows the complications that are caused due to hysterectomy.

Table 8: comparison between type of hysterectomy.

Complications	Tlh	Ah	Vh	Total
Bleeding	0	3	3	6
Raise in temperature	21	3	1	25
Abdominal pain	11	16	3	30
Blood in urine	3	5	8	16
Nil	58	10	5	73
Total	93	37	20	150

hysterectomy, compared with those aged 25-39 years (5.01% vs. 0.33%). Obesity was marginally related with a higher risk of hysterectomy. History of prior pregnancy loss conferred a greater risk for hysterectomy. Of the 75 (68.18%, 75/110) cases who provided further information on hysterectomy, 84.00% (63/75) had undergone total abdominal hysterectomy and 70.67% (53/75) had received surgery for leiomyoma. In our study urban (54%) were the most to undergo hysterectomy whereas rural (46%). Most of the subjects are married with 100% which is similar to Tea H.I Brummer. Most of housewife 84% underwent hysterectomy whereas working women were 16%. Age group of 40-49 were 79 which show the majority of prevalence. The most common indication was uterine fibroid (44%), AUB (24%), Adenomyosis (19.3%), uterine prolapsed (8.665%) and endometriosis (4%). TLH (62%), AH (25%) and VH (13%) were the type of hysterectomy done for the various type of indications.

The efficacy of the type of hysterectomy is compared with paired T-test at significance $p=0.05$ and the significance of TLH p value is 0.118512, significance of AH p value is 0.131877, the significance of VH p value is 0.147923. By comparing the significance p value TLH is more effective than AH and VH. The safety of the type of the surgical procedure was done by using in the mean of the complications that are caused due to hysterectomy. Overall TLH with mean of 1.612903, AH of 4.05405 and VH of 7.5. these are compared with paired T test at significance P value of 0.05, the significance of TLH P

value is 0.084365, the significance of AH P value is 0.1097 and the significance of VH P value is 0.133723. By the above comparison TLH is the safest type of surgical procedure than AH and VH respectively.

Bleeding (6) is the least common type of complication caused due to surgical procedure, Blood in urine (16), raise in temperature (25) and abdominal pain (30).

CONCLUSION

In our study subjects, the family history, obesity, stress, menopausal stage and diet habits are found to be predisposing factors for development of indications like adenomyosis, endometriosis, uterine fibroid, uterine prolapse, abnormal uterine bleeding which are responsible for conducting hysterectomy. Urban woman is more prone with above mentioned complications thus underwent hysterectomy. Uterine fibroid is the most common indication for hysterectomy, TLH is the safe and effective procedure for hysterectomy when compared with vaginal and abdominal hysterectomy.

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