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RETROSPECTIVE STUDY OF TOTAL ABDOMINAL HYSTERECTOMY VERSUS VAGINAL HYSTERECTOMY

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ABSTRACT: INTRODUCTION: Hysterectomy is one of the commonly performed surgeries by the gynecologists apart from caesarean section for various benign and malignant gynecological problems pertaining to uterus, tubes and ovaries. Two major routes commonly performed are abdominal and vaginal hysterectomy apart from laparoscopic hysterectomy. **OBJECTIVE:** The purpose of this study was to find out frequency, indications, complications of Total abdominal hysterectomy (TAH) and vaginal hysterectomy (VH) done at Vinayaka Missions Medical College and Hospital, Karaikal and their impact on future. **STUDY DESIGN:** Historic cohort. **MATERIALS AND METHODS:** This is a retrospective study involving 1080 patients, 685 patients had TAH and 395 patients had VH between 2007 and 2012. The original case files and surgery reports were analyzed and data collected with reference to age, indication, parity, blood group, associated pelvic pathology and uterus size, co-morbidity, previous surgery, pre and post-operative transfusions, type of anesthesia, intra operative and post-operative complications, duration of hospital stay and the course of antibiotics. **RESULTS:** From our study we found that the morbidity for abdominal hysterectomy was more compared to vaginal hysterectomy for benign diseases in various aspects except for intra-operative blood loss which was more for vaginal hysterectomy in comparison with abdominal hysterectomy. The average duration of indwelling catheter was less in VH compared to TAH. There was no significant difference in the outcome with the type of anesthesia and the course of antibiotics. **CONCLUSION:** The overall complications for VH in selected cases were lesser than TAH which may suggest that VH may be an appropriate alternative to TAH.

KEYWORDS: Total abdominal hysterectomy, vaginal hysterectomy

INTRODUCTION: Hysterectomy is one of the commonly performed surgeries by the gynecologists, apart from caesarean section, for various benign and malignant gynecological problems pertaining to uterus, tubes and ovaries. Hysterectomy was first described by Soranus in a case of uterovaginal prolapse; he presumably performed amputation of cervix. In the sixteenth century an Italian, Berengario de Capri wrote about excision of uterine portion in prolapse of uterus. The first recorded operation was by Langenbeck, in the year 1825, who removed the uterus for advanced cervical malignancy. Two major routes commonly performed are abdominal and vaginal hysterectomy apart from laparoscopic hysterectomy. The commonest indication for TAH being fibroid uterus and prolapsed uterus for VH. Other indications are DUB, chronic cervicitis, adenomyosis, endometriosis and for malignancy.¹ Nowadays VH is done for non-descent uterus for conditions like DUB, adenomyosis and fibroid uterus. Total laparoscopic hysterectomy and laparoscopic assisted vaginal hysterectomy also form a major share in the routes of hysterectomy.

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OBJECTIVES: The aim of this study is to find out frequency, indications and complications of TAH versus VH done at Vinayaka Missions Medical College Hospital, Karaikal and their impact on future and to draw solid guide lines for selecting patients for TAH and VH.

MATERIAL AND METHODS: This is a study involving 1080 patients, 685 patients had TAH; 395 patients had VH between 2007 and 2012. The original case files and surgery reports were analyzed and data collected with reference to age, indication, parity, blood group, associated pelvic pathology and uterus size, co-morbidity, previous surgery, pre and post-operative transfusions, type of anesthesia, intra operative and post-operative complications, duration of hospital stay and the course of antibiotics.

STATISTICAL ANALYSIS: The analysis was performed using SPSS version 10. The frequency and percentage were computed or presentation of all variables. The chi-square test was used for calculating the p value applicable for complications of hysterectomy.

RESULTS: The mean age of the patient who had undergone hysterectomy was 58.5 + 12 years for vaginal and 44.69+7.9 years for abdominal hysterectomy. The parity of the patient in both groups were belonging to para 1-2 in majority. The complication rate in terms of pyrexia was 10% for VH and 20% for TAH with the p value of 0.05, postoperative wound infection of 31% for TAH and 16% for VH. The decrease in hematocrit was lower in TAH (2.39+1.05%) than in VH. Hospital stay was less for VH i.e. less than 4 days compared to 7 days for TAH.

In TAH, the youngest was 21 years, with tubo -ovarian mass and pyoperitoneum; history revealed laparotomy at 15 years of age for cryptomenorrhea and maldeveloped uterus. She developed subsequent endometriosis with PID treated elsewhere. The oldest patient was 70 years. In VH the youngest was 29 years and the oldest was 80 years. Majority of the patients in both groups were belonging to para 1 – 2. The foremost indication in TAH was fibroid uterus (45%). In VH it was mainly prolapse uterus (99%).Hypertension was 32% in TAH and 41% in VH. Diabetes was 30% in both groups. In VH 71% had uterine size less than 6 weeks; in TAH 53% it was between 12–14 wks.

YEARS	ABDOMINAL	VAGINAL	TOTAL
> 60	20 (3%)	45 (11%)	65 (6%)
50 – 59	120 (18%)	140 (35%)	260 (24%)
40 – 49	370 (54%)	150 (38%)	520 (48%)
30 – 39	135 (20%)	50 (13%)	185 (17%)
< 30	40 (6%)	10 (3%)	50 (5%)
TOTAL	685 (63%)	395 (37%)	1080 (100%)

TABLE 1: SHOWING AGE DISTRIBUTION

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INDICATIONS	VH	TAH	TOTAL
FIBROID	---	309 (45%)	309 (29%)
DUB	---	150 (22%)	150 (14%)
ADENOMYOSIS	---	68 (10%)	68 (6%)
OVARIAN PATHOLOGY	----	54 (8%)	54 (5%)
CHRONIC CERVICITIS	---	25 (4%)	25 (2%)
ENDOMETRIAL HYPERPLASIA	---	24 (3%)	24 (2%)
ENDOMETRIOSIS	---	20 (3%)	20 (2%)
FIBROID POLYP	3(1%)	19 (3%)	22 (2%)
CERVICAL DYSPLASIA	---	8 (1%)	8 (1%)
PID	----	5 (1%)	5 (1%)
ENDOMETRIAL CARCINOMA	---	2	2
HYDATIDIFORM MOLE	---	1	1
PROLAPSE	392(99%)	---	392 (36%)
TOTAL	395 (37%)	685(63%)	1080

TABLE 2: SHOWING INDICATIONS FOR HYSTERECTOMY

ASSOCIATED MEDICAL ILLNESS	TAH	VH
HYPERTENSION	32%	41%
DIABETES MELLITUS	30%	30%
HYPOTHYROIDISM	18%	11%
CORONARY ARTERY DISEASE	11%	7%
BRONCHIAL ASTHMA	8%	7%
RENAL DISEASE	3%	3%
RHEUMATIC HEART DISEASE	3%	3%

TABLE 3: SHOWING CO MORBIDITY

WEEKS	VH	TAH	TOTAL
< 6 Weeks	280(71%)	---	280(26%)
7 – 8 Weeks	68(17%)	150(22%)	218(20%)
9 – 11 Weeks	30 (8%)	90 (13%)	120 (11%)
12 -14 Weeks	17 (4%)	365(53%)	382 (35%)
15 – 20 Weeks	-	70 (10%)	70 (7%)
➤ 20 Weeks	-	10 (2%)	10 (1%)
Total	395 (37%)	685 (63%)	1080

TABLE 4: SHOWING UTERINE SIZE

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Blood loss (ml)	VH	TAH	Total
100-500	45 (11%)	474 (69%)	519 (48%)
500-1000	350 (89%)	211 (31%)	561 (52%)
Total	395	685	1080

TABLE 5: SHOWING BLOOD LOSS

In TAH 69% had blood loss between 100-500 ml. In VH 89% had blood loss of more than 500ml. Approximate duration of surgery was 60 – 80 minutes in TAH and 40 - 60 minutes in VH. The average duration of indwelling urinary catheter was longer in TAH. One of the patients had Foleys catheter for 25 days due to previous caesarian section. Catheter was in situ to avoid fistula formation. The course of antibiotics did not show any difference in both groups. Hospital stay was less in case of VH. In TAH 89% patients were discharged on the second week; in VH 96% were discharged within in 1 week. Post – operative complications were less in cases of VH.

COMPLICATIONS	VH	TAH
BLEEDING		
LAPAROTOMY	1(1%)	8
INJURY		
BLADDER	---	1
URETER	---	1
BOWEL	---	1
INFECTION		
PNEUMONIA	---	---
PYREXIA	10%	20%
UTI	20%	20%
PELVIC ABSCESS	---	1%
ILEUS	---	15%
BURST ABDOMEN	---	1%
RESUTURING	---	16%
WOUND INFECTION	15 (16%)	31%
CUFF CELLULITIS	4(4%)	---
VAULT DEHISCENCE	4(4%)	---
VVF	---	2%
VAULT GRANULOMA	15(16%)	---
VAULT PROLAPSE	6(6%)	---

TABLE 6: SHOWING COMPLICATIONS OF HYSTERECTOMY

DISCUSSION: The route of hysterectomy; the traditional abdominal hysterectomy performed commonly for fibroid over vaginal hysterectomy done for uterine prolapse has been debated ever since laparoscopic technique was introduced, in terms of surgical bleeding, operative time, bladder and bowel injuries, febrile morbidity, post-operative hemorrhage, post-operative infections.

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Our study shows that vaginal hysterectomy is superior to other routes taking into account the above said variables for benign disease without much complication. In order to control complications and decrease the morbidity, a high risk population should be defined based on the patients' history of pelvic surgery and endometriosis, on their parity and the size of their uterus.² In the study done by Juha Makinen in 2001 complications like infections, hemorrhage and bowel injuries were more in vaginal hysterectomy group when compared to abdominal hysterectomy and also the author observed a decreasing trend of bowel complications with increasing experience of the surgeons in vaginal hysterectomy.³

Only one study done by Davies. A had shown that route of hysterectomy is not a major determining factor for perioperative complications when other compounding variables are taken into account.⁴ Large and comprehensive randomized controlled studies are badly needed to give answer to these questions.

Our present study shows more of intraoperative bleeding for vaginal hysterectomy in quantity (500 to 1000 ml) that is 89% when compared to abdominal hysterectomy (31%) in contradictory to other studies done in Finland U.S.A, U.K., France and Saudi Arabia.⁵ This could be due to increase in percentage of prolapse uterus particularly procidentia prevalent in our rural area.

Evidence shows that transvaginal hysterectomy is both feasible and optimum for type of patients who have long been considered inappropriate for vaginal route even for uterus size upto 20 weeks⁶. Usage of newer instruments like Bulldog vulsellum and Biclamp facilitates vaginal approach easier and contributes to improved hemostasis and decreased operative time.⁷ Though most of the studies conducted confirm the superiority of the vaginal hysterectomy over abdominal hysterectomy, the incidence of abdominal hysterectomy versus vaginal is still more (3: 1).⁷ Even in our study out of 1080 patients 685 had TAH and 395 had VH (2: 1); it shows that presently the incidence of TAH is more than VH for benign diseases.

Over all our study confirms that vaginal hysterectomy is one of the promising routes of hysterectomy compared to abdominal hysterectomy in terms of shorter hospital stay, operating time, shorter convalescent period, decreased febrile morbidity etc. Study done by Dicker RC and Razia Iftikhar confirms the same.^{8,9} Vaginal hysterectomies can be done for indications other than prolapse uterus i.e. for fibroid up to 20 weeks without much complications.

May be in future Laparoscopic Hysterectomy can take an increase in frequency as the route of surgery for various gynecological indications with less morbidity as many surgeons are getting trained in this procedure in the recent past. Laparoscopic hysterectomy is associated with less pain and better quality of life than TAH.¹⁰

CONCLUSION: The route of approach in hysterectomy is decided upon indication, size of uterus and the skill of the gynecologist. VH is considered as 'SIGNATURE OPERATION OF GYNAECOLOGIST' and scores better due to less intra and post-operative complications, earlier recovery and cost effective. Long term effects of TAH & VH could not be studied properly due to failure of compliance on the part of the patient since majority of them come from far off villages. Though laparoscopic hysterectomy is associated with higher rate of major complications than TAH, it might have a bright future with the advent of improved techniques and invention of sophisticated instruments increased resident training. It definitely as the advantage of lesser hospital stay, less pain, quicker recovery and better short term quality of life. The robotic surgery is still in infant stage in the developing countries.

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