

# Comparative study of vaginal hysterectomy and abdominal hysterectomy for enlarged uteri in non descent cases

Shrikant Warade<sup>1</sup>, Vishakha Kondawar<sup>2\*</sup>

<sup>1</sup>Associate Professor, <sup>2</sup>Postgraduate Student, Department of Obstetrics and Gynaecology, Shri Vasantnao Naik Government Medical College, Waghapur Road, Yavatmal, Maharashtra, INDIA.

Email: [vishakhak14@gmail.com](mailto:vishakhak14@gmail.com)

## Abstract

**Background:** Hysterectomy is one of the most common gynecological surgeries performed worldwide. Various attempts are being made to reduce the number of abdominal hysterectomy and replace them with vaginal hysterectomy or laparoscopic assisted vaginal hysterectomy as the next choice. **Aim:** To compare the most efficient route of hysterectomy in enlarged uteri and non descent cases by comparing the intra and postoperative complications of vaginal and abdominal hysterectomies. **Material and Methods:** A total of 100 cases requiring hysterectomy for enlarged uteri were randomly selected. Out of which, 50 cases underwent NDVH and 50 cases underwent total abdominal hysterectomy for same indications. Blood loss, intraoperative and postoperative complications were noted. **Results:** Only 2% of NDVH cases required blood transfusion postoperatively whereas, 46% cases of TAH required blood transfusion postoperatively ( $P < 0.00001$ ; Highly significant). Mean operative time for NDVH group was 48.68 min and for abdominal group was 92.52 min which was significantly more as compared to NDVH group. One case in NDVH group was complicated due to adhesion. In abdominal group, 9 (18%) cases were complicated due to adhesions. Febrile morbidity (24%) was common in abdominal group. **Conclusion:** Vaginal hysterectomy is a better option than abdominal hysterectomy as it is feasible, safe and provides more patient comfort without increasing the duration of surgery and intraoperative and postoperative complications.

**Key Words:** Hysterectomy, abdominal, vaginal, blood loss, complications

## Address for Correspondence:

Dr. Vishakha Kondawar, Postgraduate Student, Department of Obstetrics and Gynaecology, Shri Vasantnao Naik Government Medical College, Waghapur Road, Yavatmal, Maharashtra, INDIA.

Email: [vishakhak14@gmail.com](mailto:vishakhak14@gmail.com)

Received Date: 25/10/2019 Revised Date: 21/11/2019 Accepted Date: 08/12/2019

DOI: <https://doi.org/10.26611/10121236>

## Access this article online

Quick Response Code:



Website:

[www.medpulse.in](http://www.medpulse.in)

Accessed Date:  
13 December 2019

recovery and return to work. In today's world, vigorous attempts are being made to reduce the number of abdominal hysterectomy and replace them with vaginal hysterectomy or laparoscopic assisted vaginal hysterectomy as the next choice. Vaginal approach greatly reduces complications, decreases hospital stay, lowers hospital charges and postoperative comfort is better. The aim of this study was to compare the most efficient route of hysterectomy in enlarged uteri and non-descent cases by comparing the intra and postoperative complications of vaginal and abdominal hysterectomies.

## INTRODUCTION

Hysterectomy, abdominal or vaginal or laparoscopic assisted vaginal hysterectomy, is the most commonly performed elective major gynecological surgery.<sup>1</sup> The current ratio of abdominal to vaginal hysterectomy is 3:1 for the treatment of benign disorders. The ratio should be reversed because fewer postoperative complications are associated with the vaginal route, which allows earlier

## MATERIAL AND METHODS

The study was carried out in the Department of Obstetrics and Gynaecology at a tertiary care hospital. A total of 100 cases requiring hysterectomy for enlarged uteri were randomly selected. Out of which, 50 cases underwent NDVH and 50 cases underwent total abdominal hysterectomy for same indications. Institutional Ethical

Committee approval was taken before commencement of the study. Written informed consent was taken from each patient.

**Study design**

Prospective observational study

**Inclusion criteria**

- Uterine size not exceeding 12 weeks of gravid uterus
- Adequate uterine mobility
- Fibroid uterus
- Dysfunctional uterine bleeding
- Chronic cervicitis
- Adenomyosis
- Laparoscopic assisted vaginal hysterectomy
- Patients with previous 2 or more LSCS

**Exclusion criteria**

- Uterine size more than 12 weeks of gravid uterus
- Restricted uterine mobility
- Pelvic organ prolapsed
- Patients with complex adnexal mass

**Sample size**

It was calculated by considering allowable error of 20%.2 Using the formula,  $N=4pq/L^2$  where, p=proportion, q=100-p, L=allowable error and N= sample size. Thus,  $4 \times 50 \times 50 / (20 \times 50 / 100)^2 = 100$ . Thus, 50 in each group.

**Sampling method**

Simple random sampling method

**Methodology**

Before surgery, every patient was clinically evaluated and routine investigations were done which included complete blood count, urine analysis for albumin, sugar, microscopy, Blood sugar and blood grouping, Kidney function test, Chest x-ray, ECG, USG abdomen and pelvis and pap smear Spinal anaesthesia was used in most cases. Vaginal hysterectomy was done by Haeney’s technique. For abdominal hysterectomy, a suprapubic transverse incision was given. Operating time for vaginal hysterectomy was calculated from incision at cervicovaginal junction to the completion of closure of vault. Operating time for abdominal hysterectomy was calculated from incision on the abdomen to the closure of skin incision. Intraoperative complications like adhesions, injury to bladder and bowel and haemorrhage were noted. The time taken for patient to ambulate voluntarily were noted. All patients were advised to ambulate early. Postoperatively, patients were noted for complications like fever, pain, bladder and bowel disturbances, bleeding and the abdomen wound was inspected in those patients who had undergone abdominal hysterectomy. The term haemorrhage was used to define those cases requiring laparotomy, laparoscopy and/or blood transfusion postoperatively. Blood loss was assessed by fall in hemoglobin postoperatively.

**Statistical analysis**

Statistical analysis was done by descriptive and inferential statistics using Chi-square test and students unpaired t-test. Software used in analysis were SPSS 17.0 version and graph pad prism 5.0.  $p < 0.05$  was considered as level of significance.

**RESULTS**

In this study majority of the patients were in the age group of 41 years to 50 years. In vaginal group, minimum age was 36 years and maximum age was 50 years, whereas, in abdominal group, minimum age was 36 years and maximum age was 55 years. Mean age in NDVH group was 43.2 years and in abdominal group was 44.28 years.

**Table 1: Age wise distribution of patients**

Age group (yrs)	NDVH	TAH	$\chi^2$ value
31-40 yr	11 (22%)	16 (32%)	
41-50 yr	39 (78%)	30 (60%)	
51-60 yr	0 (0%)	4 (8%)	6.10
Total	50 (100%)	50 (100%)	$p=0.04 (<0.05)$
Mean age	43.20	44.28	Significant
SD	2.74	4.13	
Range	36-50	40-55	

The patients in both NDVH and abdominal group were having BMI in the range of 18-25 kg/m<sup>2</sup> and mean BMI for NDVH group was 24.27 kg/m<sup>2</sup>. Mean BMI for abdominal group was 24.23 kg/m<sup>2</sup>. In this study, both NDVH and abdominal hysterectomy was common in para 3 (56% vs 46%) followed by para 4 (30% vs 36%), para 5 (6% vs 10%). Four patients were of para 2 in each group. Difference between two study groups with respect to parity was statistically not significant. Out of 50 cases, 47 cases of NDVH had past history of normal vaginal delivery, whereas, 3 cases had cesarean section. Out of 50 cases of abdominal group, 46 cases had past history of normal vaginal delivery and 4 cases had history of cesarean section. Difference between two study group was statistically not significant. In this study, 39

cases in NDVH group and 40 cases in abdominal group were without any surgical history. There was no statistical difference between two study groups.

**Table 2:** Distribution of patients according to their diagnosis

Diagnosis	NDVH	TAH	X <sup>2</sup> value
Fibroid	15 (30%)	25 (50%)	9.19 p=0.32 (>0.05) Not Significant
Adenomyosis	13 (26%)	9 (18%)	
DUB	9 (18%)	7 (14%)	
Chronic cervicitis	9 (18%)	7 (14%)	
Endometrial polyp with fibroid	2 (4%)	1 (2%)	
Adenomyosis with fibroid	0 (0%)	1 (2%)	
Cervical polyp with fibroid	2 (4%)	0 (0%)	

In this study, NDVH was done for 30% cases of uterine fibroid and TAH was done for 50% of cases (Table 2). Difference between two groups with respect to diagnosis was statistically not significant. Need for blood transfusion was significantly more in abdominal group as compared to NDVH group as blood loss was more in these cases. Only 2% of NDVH cases required blood transfusion postoperatively whereas, 46% cases of TAH required blood transfusion postoperatively (P<0.00001; Highly significant). Mean operative time for NDVH group was 48.68 min and for abdominal group was 92.52 min which was significantly more as compared to NDVH group.

**Table 3:** Comparison of intraoperative complications in both the groups

Intraoperative complications	NDVH	TAH	X <sup>2</sup> value	p value
None	49 (98%)	40 (80%)	8.31	0.016 (<0.05) Significant
Bowel injury	0 (0%)	0 (0%)		
Bladder injury	0 (0%)	1 (2%)		
Adhesion	1 (2%)	9 (18%)		

Out of 50 cases of NDVH group, 49 (98%) cases were without any intraoperative complications. One case was complicated due to adhesion. In abdominal group, 40 (80%) cases were without any intraoperative complications, whereas, 9 (18%) cases were complicated due to adhesions. Difference between two groups with respect to intraoperative complications was statistically significant.

**Table 4:** Comparison of postoperative complications in both the groups

Postoperative complications	NDVH	TAH	X <sup>2</sup> value	p value
None	33 (66%)	15 (30%)	25.92	0.000 (<0.05) Significant
Febrile morbidity	8 (16%)	12 (24%)		
Urinary tract infections	4 (8%)	2 (4%)		
Respiratory tract infections	5 (10%)	5 (10%)		
Paralytic ileus	0 (0%)	4 (8%)		
Wound infection	0 (0%)	12 (24%)		
Vault hematoma	0 (0%)	0 (0%)		

Out of 50 cases of NDVH, 33 (66%) patients were without any postoperative complications. Febrile morbidity (24%) was common in abdominal group. Secondary suturing was required in 5 cases of abdominal group.

## DISCUSSION

Vaginal surgery allows the surgeon to operate by the least invasive route of all, utilizing an anatomical orifice. Favorable factors for a non-descent vaginal hysterectomy are a mobile uterus with normal dimensions, large pelvis to allow manoeuvrability, counselling for a tentative vaginal hysterectomy and experience. In this study, postoperative blood transfusion was significantly more in abdominal group as compared to NDVH group as blood loss was more in these cases. Only 2% of NDVH cases required blood transfusion postoperatively whereas, 46% cases of TAH required blood transfusion postoperatively, which was clearly in excess. This

indicates that TAH is associated with more intraoperative blood loss. This study can be well compared with study by Saha R *et al* where 2.1% cases of NDVH group required postoperative blood transfusion.<sup>3</sup> Kumar *et al* treated 80 women by vaginal hysterectomy with success rate of 95%.<sup>4</sup> The operating time, and intraoperative blood loss was directly proportional to the size of the uterus and concluded that vaginal hysterectomy is a safe and effective procedure in uteri of less than 12 weeks size. Garg *et al*, conducted a study comparing vaginal hysterectomy with abdominal hysterectomy with 23 patients in each group and found a reduced operating time, lesser intraoperative blood loss, reduced

postoperative morbidity and shorter hospital stay in the vaginal hysterectomy group.<sup>5</sup> In our study, 98% of cases of NDVH group were without any intraoperative complications. One case was complicated due to adhesion. In abdominal group, 40 (80%) cases were without any intraoperative complications, whereas, 9

(18%) cases were complicated due to adhesions. Thus, NDVH is associated with less intraoperative complications as compared to other previous studies intraoperative complications of bladder and bowel injury were very less in present study.<sup>3,6-8</sup> There was a single case of bowel injury in present study.

**Table 5:** Comparison of postoperative complications with other studies

Studies	Paralytic ileus		UTI		Fever		Wound infections	Vault hematoma	
	VH	TAH	VH	TAH	VH	TAH	TAH	VH	TAH
Dewan R <i>et al</i> <sup>9</sup>	-	4%	-	-	2%	-	-	1%	0
Singh A <sup>10</sup>	-	7%	-	-	1	3	1	1	0
Dawood NS <i>et al</i> <sup>6</sup>	-	8%	3	1	1	5	6	2	0
Saha R <i>et al</i> <sup>3</sup>	-	4%	5	2	2	-	-	1	0
Mehata S <i>et al</i> <sup>7</sup>	-	-	2	-	1	-	-	2	0
Begum S <i>et al</i> <sup>8</sup>	-	-	1	-	1	-	-	1	0
Present study	-	8	8	4	16	24	24	0	0

In this study, paralytic ileus was encountered in 8% cases of TAH whereas it was not seen in NDVH cases. UTI was encountered in 4% cases of TAH group and 8% of NDVH group. Thus, UTI was more common in NDVH group. Febrile morbidity (24%) was common in abdominal group. Dawood *et al*<sup>6</sup> and Gayak *et al*<sup>11</sup> summarized that vaginal hysterectomy is better in terms of intraoperative and postoperative outcomes, when compared to abdominal, laparoscopic and laparoscopic assisted vaginal hysterectomies.

### CONCLUSION

Vaginal hysterectomy is a better option than abdominal hysterectomy as it is feasible, safe and provides more patient comfort without increasing the duration of surgery and intraoperative and postoperative complications.

### REFERENCES

1. Kavoc RS. Guidelines to determine the route of hysterectomy. *Obstet Gynaecol* 1995;85(1):18-22.
2. Mahajan PK. *Methods in biostatistics*. 11th ed.
3. Saha R, Shrestha NS, Thapa M, Pandhey SM. Non-descent vaginal hysterectomy: Safety and feasibility. *NJOG* 2012;7(14).
4. Kumar S, Antony ZK. Vaginal hysterectomy for benign nonprolapsed uterus. Initial Experience. *J Obstet Gynaecol Ind.* 2004;54(1):60–63.
5. Garg PK, Deka D, Malhotra N. Non-descent vaginal hysterectomy for Benign Condition. A better proposition

than abdominal hysterectomy. *Obst and Gynaec Today.* 2002;7(6):345–46.

6. Dawood NS, Mahmood RM. Comparison of vaginal and abdominal hysterectomy. *J Ayub Med Coll Abbottabad* 2009;21(4).
7. Mehata ST, Trvedi YN, Bhalodia P. Role of non-descent vaginal hysterectomy in advancing gynaecological practice. *NHL J Med Sci* 2014;3(1).
8. Begum S, Akhtar R, Barua S. A cross sectional descriptive study on non-descent vaginal hysterectomy. *Chattagram Maa-o-Shishu Hosp Med Coll J* 2014;13(1).
9. Dewan R, Agarwal S, Bharti M, Sen S. Non-descent vaginal hysterectomy- An experience. *J Obstet Gynaecol Ind* 2004; 54: 376-8.
10. Singh A. Vaginal hysterectomy for non-prolapsed uterus. *Obstet Gynecol India* 2006; 56(2): 152-155.
11. Gayak K, Smitha A, Tripathy J. Abdominal versus vaginal hysterectomy in non-descent cases. *Int J Reprod Contracept Obstet Gynecol.* 2015;4:419–23.

Source of Support: None Declared  
Conflict of Interest: None Declared