

## Comparative study of vaginal hysterectomy and abdominal hysterectomy in non-descent uterus

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### Abstract

Hysterectomy—abdominal or vaginal or laparoscopic assisted vaginal hysterectomy is the most commonly performed elective major gynaecological surgery. The present study was conducted in our institute in 120 hysterectomy patients admitted for hysterectomy from February 2015 to July 2015.

**Objective:** The objective of this study was to compare the intra operative and post-operative complications following vaginal hysterectomy for non descent uterus and abdominal hysterectomy for similar indications.

**Methods:** A prospective comparative randomized study was carried out on 120 cases out of which 60 undergoing vaginal hysterectomy for non-descent uterus and 60 undergoing abdominal hysterectomy for similar indications.

**Results:** The most common indication was fibroid uterus; there was a statistical highly significant difference in blood loss. Postoperatively, complications were more common in those who underwent abdominal hysterectomy. Postoperatively, patients who underwent vaginal hysterectomy ambulated earlier and were discharged earlier.

**Conclusion:** Vaginal hysterectomy is a safe, least invasive route and is associated with lesser complications.

**Keywords:** Vaginal hysterectomy, Non-descent uterus and abdominal hysterectomy.

### Introduction

Hysterectomy –abdominal or vaginal or laparoscopic assisted vaginal hysterectomy is the most commonly performed elective major gynaecological surgery. The rate of hysterectomy has varied between 6.1 and 8.6 out of every 1000 women of all ages. The most recent analysis of health care cost and utilization project data showed that abdominal hysterectomy was performed in 66% of cases, by vaginal route in 21.8% and laparoscopic route by 11.8%. Women believe that the uterus and menstruation is the core of their femininity and sexual life. The current ratio of abdominal to vaginal hysterectomy is 3:1 for the treatment of benign disorders.

The ratio should be reverse because fewer postoperative complications are associated with the vaginal route which allows earlier 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. Hence to maximize the proportion of hysterectomies performed vaginally, gynaecologists need to be familiar with the surgical techniques for dealing with non descent uteri, uterine, leiomyoma and vaginal oophorectomy. So it is in the best interest of the patient if vaginal route is mastered. Vaginal surgery is least invasive and results in better post-operative quality of life.

### Aims and Objectives

- To compare Vaginal and Total abdominal hysterectomy in terms of morbidity and blood loss.

- To compare the intra-operative and postoperative complications following vaginal and total abdominal hysterectomy.
- To compare vaginal and total abdominal hysterectomy in term of postoperative hospital stays.

### Materials and Methods

The study was carried out at our hospital. Total of 120 cases admitted to the Gynaecology unit requiring hysterectomy for benign diseases were randomly selected out of which 60 cases underwent vaginal hysterectomy for non descent uterus and 60 cases underwent abdominal hysterectomy for the same indications during the study period between February 2015 to July 2015.

### Methodology

Before surgery, every patient was clinically evaluated and investigated. The investigations included:

- Haemoglobin
- Urine analysis for albumin, sugar, microscopy
- Blood group and Rh typing
- Blood sugar, blood urea, serum creatinine
- HIV, HbsAg
- Chest X- ray, ECG
- USG — abdomen and pelvis
- Pap smear

Written informed consents were taken from all patients after explaining the procedure. Every patient was completely evaluated by an anaesthesiologist before deciding the type of anaesthesia. Spinal anaesthesia was used in most cases.

Vaginal hysterectomy was done by Haeney's technique. For abdominal hysterectomy, a supra-pubic transverse incision was given.

Operating time for vaginal hysterectomy was calculated from incision at cervico-vaginal junction to the completion of closure of vault. Operating time for abdominal hysterectomy was calculated from incision on the abdomen to closure of skin incision.

Intra operative complications like adhesions, injury to bladder and bowel and haemorrhage were noted.

Foley's catheterization of bladder and placement of vaginal pack were done according to the surgeon's choice.

Analgesics used during the immediate post operative period to make the patients pain free were noted. Injection Tramazac, injection Pethidine and injection Fortwin were either used alone or in combination.

The time taken for the patient to ambulate voluntarily was noted. All patients were advised to ambulate early.

On the first post operative day, haemoglobin and urine — microscopy were done.

Post operatively 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 post operatively. Post-operative hospital stay was recorded in whole days.

### Observations and Results

The present study included 120 women undergoing hysterectomy, 60 were subjected to vaginal hysterectomy and 60 were subjected to abdominal hysterectomy.

**Table 1: Age distribution**

Age	VH		AH	
	Nos.	%	Nos.	%
24 to 34	4	6.67	8	13.33
35 to 44	20	33.33	32	53.33
45 to 54	28	46.67	16	26.67
Above 54	8	13.33	4	6.67
Total	60	100	60	100

In this study majority of the patients were in the range of 35-54 years. In vaginal hysterectomy majority cases were in age group 45-54 and in abdominal 35-44. In the vaginal group, minimum age was 32 and maximum age was 58. In the abdominal group, minimum age was 30 and maximum age was 55. Mean age in the vaginal group is 47.67 and 42.66 in the abdominal group.

**Table 2: Parity distribution**

Age	VH		AH	
	Nos.	%	Nos.	%
0	2	3.3	2	3.3
1	5	8.3	1	1.7
2	24	40.0	25	41.7
3	17	28.3	21	35.0
4	9	15.0	8	13.3
5	2	3.3	3	5.0
6	1	1.7	0	0.0
Total	60	100	60	100

In this study vaginal hysterectomy is common in para 2 (40%) and abdominal hysterectomy in para 2 (41.7%).

**Table 3: Diagnosis**

Diagnosis	VH		AH	
	Nos.	%	Nos.	%
DUB	33	55.0	21	35.0
Fibroid	21	35.0	37	61.7
Adenomyosis	4	6.7	2	3.3
PID	2	3.3	0	0.0
Total	60	100	60	100

In this study, commonest indication in vaginal hysterectomy is DUB (33), followed by fibroid (21) uterus adenomyosis (4) and PID (2).

Commonest indication in abdominal hysterectomy is fibroid uterus (37) followed by DUB (21) and uterus adenomyosis (2).

**Table 4: Mode of delivery distribution**

Delivery	VH		AH	
	Nos.	%	Nos.	%
Vaginal	50	83.3	45	75.0
Caesarean	8	13.3	14	23.3
Nullipara	2	3.4	1	1.7
Total	60	100	60	100

Vaginal hysterectomy was more common as compared to abdominal hysterectomy in case of vaginal delivery mode. Abdominal hysterectomy was more common compared to vaginal hysterectomy after caesarean delivery in this study. There were 2 cases of nullipara who underwent vaginal hysterectomy and one case of nullipara who underwent abdominal hysterectomy. Majority of patients had 6-8 weeks size of the uterus in both the groups.

#### Mean gestational week:

- Vaginal group 6.97±2.07.
- Abdominal group 7.8±2.23.

The difference between the preoperative and postoperative haemoglobin was statistically significant. The fall in the Hb% in the abdominal group was more drastic when compared to the vaginal group. This

indicates that the blood loss was more in the abdominal group.

**Table 5: Intraoperative complications**

Complications	VH		AH	
	Nos.	%	Nos.	%
Haemorrhage	3	5	8	13.33
Adhesions	1	1.6	7	11.6
Bladder injury	1	1.6	2	33.33
Bowel Injury	0	0	0	0
No Complications	53	88.33	43	71.66
Total	60	100	60	100

There were 3 cases of haemorrhage in vaginal group and 8 in abdominal. There were 7 cases of adhesions complicating surgery in abdominal group and 1 case of adhesion complicating surgery in vaginal group and 1 case of bladder injury in vaginal group and 2 in abdominal. There were no cases of bowel injury in both the groups.

**Table 6: Postoperative complications**

Complications	VH		AH	
	Nos.	%	Nos.	%
Hemorrhage	1	1.6	2	3.2
UTI	1	1.6	5	8.33
Vault prolapsed	1	1.6	2	3.2
Wound infection	2	3.2	8	13.33
Fever	2	3.2	10	16.67
No Complications	53	88.33	33	55
Total	60	100	60	100

In the present study, post operative complications like febrile morbidity, haemorrhage, UTI was more common in abdominal cases. Relaparotomy was done in 1 case in the abdominal group due to haemorrhage. Secondary suturing was required in 4 cases due to abdominal wound infection after treating with antibiotics in the abdominal group.

**Table 7: Ambulation**

Ambulation	VH		AH	
	Nos.	%	Nos.	%
Less than 12	24	40	2	3.4
12 to 24	36	60	58	96.7
Total	60	100	60	100

Majority of the patients in the vaginal group ambulated within 12 hours, while abdominal group ambulated within 20-24 hrs Mean time taken for ambulation in vaginal group is  $14 \pm 3.61$  and abdominal group is  $20.96 \pm 2.37$  which was statistically significant. Mean postoperative stay in the vaginal group is  $3.77 \pm 1.18$  days and in the abdominal group is  $5.02 \pm 1.35$  days which is statistically significant.

## Discussion

The present study was done to compare the risk and complications following vaginal and abdominal hysterectomy. The present study included 120 women undergoing hysterectomy, 60 were subjected to vaginal hysterectomy and 60 were subjected to abdominal hysterectomy.

In this study majority of the patients were in the range of 35-54 years. In vaginal hysterectomy majority cases were in age group 45-54 and in abdominal 35-44. In the vaginal group, minimum age was 32 and maximum age was 58. In the abdominal group, minimum age was 30 and maximum age was 55. Mean age in the vaginal group is 47.67 and 42.66 in the abdominal group.

This is well compared with study by **Isik Akbay et al.** This study is well compared with Abha Singh study.

Fibroid was the commonest indication followed by DUB. Percentage of DUB was comparatively less in study by Abha Singh because cases of cervical dysplasia, carcinoma in situ and Endometrial cancer were also included in the study. Most of the patients who underwent vaginal and abdominal hysterectomy are multiparous (para 2). This is well compared with study of Pradeep Garg who had a mean parity of 2.3.

In our study there were 3.3% of nulliparous patients who underwent vaginal hysterectomy which is compared with study conducted by Albert Agostini where 17.5% of nulliparous patients underwent vaginal hysterectomy which was very high.

Our study can be well compared with Maresh et al. But adhesions complicating surgery was high in our study when compared with the other studies.

There was 5% incidence of haemorrhage in the abdominal group which was higher compared to other studies. Incidence of UTI can be well compared with Isik Akbay et al.

Incidence of wound infection in the present study was slightly high 13.33% compared with study conducted by Tariq Miskry.

Febrile morbidity occurred in 10% which is also relatively high as compared to other studies.

Postoperative stay in the present study was 3.7 days in the vaginal group which was compared with 5.3 days in the study by Emile Dorai which was high Postoperative stay in the abdominal group was 5.02 days which was slightly higher when compared to the study by Tariq Miskry.

## Summary

This study is a randomized prospective study including 60 patients who underwent vaginal hysterectomy and 60 patients who underwent abdominal hysterectomy for benign conditions in non descent uterus.

The most common indications being fibroid uterus(48.35%), followed by DUB(45%), Adenomyosis(5.01%), and PID(3.3%).

Most of the patients who underwent vaginal and abdominal hysterectomy were in the range of 35-54 years (40%). The mean age in vaginal group is 47.67 years and 42.66 years in the abdominal group.

Most of the patients who underwent both vaginal and abdominal hysterectomy are multiparous and most of the patient delivered vaginally.

Majority of the patients had bulky uterus (35%), mean uterine size in gestation weeks was 6.9 in vaginal group and 7.89 in abdominal group.

Post operatively UTI, fever is more common in the abdominal group.

Patients who underwent vaginal hysterectomy ambulated much earlier compared with abdominal group.

Majority of the patients discharged between 4-6 days postoperatively. Mean postoperative stay in vaginal group was 3.77±1.18 days and 5.02±1.35 days in the abdominal group.

### Conclusion

Vaginal hysterectomy is associated with less blood loss during surgery and decreased post-operative morbidity when compared with total abdominal hysterectomy.

Vaginal hysterectomy also allows the patient to ambulate faster, less need for catheterization of bladder post operatively and patient comfort is better compared to total abdominal hysterectomy.

Length of post operative stay is significantly reduced in patients undergoing vaginal hysterectomy than abdominal hysterectomy.

Thus all the patients with non descent uterus with benign condition should be subjected to vaginal hysterectomy unless contra indicated as it is feasible, safe and provides more comfort to the patient.

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