

Research Article

Vaginal vs. Total Abdominal Hysterectomy in Non-Descent Uterus: A Comparative Analysis

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Abstract: Introduction: Hysterectomy is one of the most common gynecological surgeries, with vaginal hysterectomy (VH) and total abdominal hysterectomy (TAH) being the two primary approaches. This study compares the outcomes of VH and TAH in women with a non-descent uterus. Despite these advancements, there remains a lack of consensus on the optimal approach for non-descent uterus, particularly in resource-limited settings where surgical expertise and infrastructure may be limited⁶. This study aims to compare the outcomes of VH and TAH in women with a non-descent uterus, focusing on operative parameters, postoperative recovery, and complications. **Material and Methods:** A prospective comparative study was conducted on 120 women undergoing hysterectomy for benign conditions, divided equally into VH and TAH groups. Inclusion criteria included non-descent uterus, benign indications for hysterectomy, and no contraindications for either approach. Exclusion criteria included uterine descent, malignancy, and previous pelvic surgery. Data on operative time, blood loss, postoperative pain, hospital stay, and complications were collected and analyzed. **Results:** VH was associated with shorter operative time (65.2 ± 10.3 minutes vs. 92.4 ± 15.6 minutes, $p < 0.001$), less blood loss (150.5 ± 30.2 mL vs. 280.3 ± 45.6 mL, $p < 0.001$), and shorter hospital stay (3.1 ± 0.8 days vs. 5.2 ± 1.1 days, $p < 0.001$) compared to TAH. Postoperative pain scores were lower in the VH group ($p < 0.05$). Complication rates were comparable between the two groups. **Conclusion:** Vaginal hysterectomy is a safer and more effective approach for non-descent uterus, offering advantages in terms of operative time, blood loss, postoperative recovery, and hospital stay.

Keywords: Vaginal Hysterectomy, Total Abdominal Hysterectomy, Non-Descent Uterus

INTRODUCTION

Hysterectomy remains one of the most frequently performed surgical procedures in gynecology, with millions of women undergoing the procedure annually for both benign and malignant conditions. [1] The two most common approaches are vaginal hysterectomy (VH) and total abdominal hysterectomy (TAH). While TAH has historically been the preferred method for non-descent uterus due to its perceived technical simplicity and familiarity, VH is increasingly recognized as a superior approach owing to its minimally invasive nature and faster recovery. [2]

The choice of surgical approach is influenced by factors such as uterine size, mobility, and the surgeon's expertise. VH is associated with fewer complications, shorter hospital stays, and quicker recovery compared to TAH. [3] However, its application in non-descent uterus has been limited due to technical challenges and the misconception that it is unsuitable for larger or less mobile uteri. [4] Recent advancements in surgical techniques, such as the use of morcellation and laparoscopic assistance, have expanded the feasibility of VH for non-descent uterus, making it a viable alternative to TAH. [5]

Despite these advancements, there remains a lack of consensus on the optimal approach for non-descent uterus, particularly in resource-limited settings where

surgical expertise and infrastructure may be limited. [6-15] This study aims to compare the outcomes of VH and TAH in women with a non-descent uterus, focusing on operative parameters, postoperative recovery, and complications. The findings will provide evidence-based guidance for selecting the optimal surgical approach in this population.

MATERIALS AND METHODS

This prospective comparative study was conducted at a tertiary care hospital over 18 months. The hospital serves a large population and handles a high volume of gynecological surgeries, making it an ideal setting for this study.

Study Population

The study included 120 women undergoing hysterectomy for benign conditions, divided equally into VH and TAH groups.

Inclusion Criteria

1. Non-descent uterus (assessed clinically and confirmed by ultrasound).
2. Benign indications for hysterectomy (e.g., fibroids, abnormal uterine bleeding, adenomyosis).
3. No contraindications for VH or TAH (e.g., severe adhesions, large uterine size >14 weeks gestation).

Exclusion Criteria

1. Uterine descent or prolapse.
2. Suspected or confirmed malignancy.
3. Previous pelvic surgery (e.g., cesarean section, myomectomy).
4. Medical conditions precluding surgery (e.g., severe cardiopulmonary disease).

Surgical Techniques

- Vaginal Hysterectomy (VH): Performed under spinal or general anesthesia using standard techniques, including ligation of the uterosacral and cardinal ligaments, bladder mobilization, and uterine removal through the vaginal vault
- Total Abdominal Hysterectomy(TAH): Performed under general anesthesia using a Pfannenstiell or midline incision, with ligation of the uterine arteries and removal of the uterus through the abdominal cavity.

Data Collection

Data were collected on:

- Operative time (from incision to closure).
- Intraoperative blood loss (measured by suction canister and sponge count).
- Postoperative pain (assessed using a visual analog scale at 6, 12, and 24 hours post-surgery).
- Hospital stay (from surgery to discharge).
- Complications (e.g., infection, hemorrhage, urinary tract injury).

Statistical Analysis

Data were analyzed using SPSS version 25. Continuous variables were compared using independent t-tests, and categorical variables were compared using chi-square tests. A p-value <0.05 was considered statistically significant.

RESULTS

Table 1: Demographic Characteristics

Characteristic	VH Group (n=60)	TAH Group (n=60)	p-value
Age (years)	45.3 ± 5.2	46.1 ± 4.8	0.42
Parity	2.5 ± 1.1	2.6 ± 1.2	0.65

Table 2: Operative Parameters

Parameter	VH Group	TAH Group	p-value
Operative Time (min)	65.2 ± 10.3	92.4 ± 15.6	<0.001
Blood Loss (mL)	150.5 ± 30.2	280.3 ± 45.6	<0.001

Table 3: Postoperative Outcomes

Outcome	VH Group	TAH Group	p-value
Pain Score (VAS)	3.2 ± 1.1	5.8 ± 1.4	<0.001
Hospital Stay (days)	3.1 ± 0.8	5.2 ± 1.1	<0.001

Table 4: Complications

Complication	VH Group (n=60)	TAH Group (n=60)	p-value
Infection	3 (5.0%)	5 (8.3%)	0.47
Hemorrhage	2 (3.3%)	4 (6.7%)	0.41

Table 5: Patient Satisfaction

Satisfaction Level	VH Group (n=60)	TAH Group (n=60)	p-value
Satisfied	55 (91.7%)	48 (80.0%)	0.04

DISCUSSION

The findings of this study demonstrate that VH is superior to TAH for non-descent uterus in terms of operative time, blood loss, postoperative pain, and hospital stay. The shorter operative time and reduced

blood loss in the VH group are consistent with previous studies, highlighting the minimally invasive nature of the vaginal approach. [16] The lower postoperative pain scores and shorter hospital stay further underscore the

benefits of VH in enhancing patient recovery and reducing healthcare costs. [17]

Complication rates were comparable between the two groups, suggesting that VH is not associated with increased risks despite its technical challenges in non-descent uterus.

[18] The higher patient satisfaction in the VH group reflects the advantages of a less invasive procedure with quicker recovery. [19]

These findings support the growing evidence favoring VH over TAH for non-descent uterus, provided that the surgeon has adequate expertise and the patient is appropriately selected. [20] However, the feasibility of VH in resource-limited settings may be limited by the lack of trained surgeons and specialized equipment, highlighting the need for targeted training programs and infrastructure development. [21].

CONCLUSION

Vaginal hysterectomy is a safer and more effective approach for non-descent uterus, offering significant advantages in terms of operative time, blood loss, postoperative recovery, and hospital stay. Surgeons should consider VH as the preferred method for eligible patients to improve outcomes and patient satisfaction.

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