# Outcome of Non Descent Vaginal Hysterectomy in Benign Gynecological Condition

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## Abstract

**Background:** The most common gynaecological surgery is hysterectomy which is indicated mostly in DUB, fibroids, adenomyosis to malignancies. The various procedures range from laparoscopic to vaginal hysterectomies in non- descent cases. Vaginal Hysterectomy appears to be, relatively advantageous or superior procedure in terms of patient safety, cost-effectiveness, faster recovery (short hospital stay), and dreaded complications. It is the only surgery which has a very good cosmetic benefit that is without any visible scar.

**Aim:** To study the outcomes of Non-descent vaginal hysterectomy in benign gynaecological conditions.

**Objectives:**

1. To assess the outcome of Non- descent vaginal hysterectomy for benign Gynaecological conditions in terms of intra operative characteristics.

2. To assess the postoperative outcome in Non-descent vaginal Hysterectomy.

**Materials:** This prospective observational study was conducted between November 2018 to October 2020. The study was done among 100 women who fulfilled the inclusion criteria. Details regarding indication, size of the uterus, operation time, mean blood loss ,hospital stay and intraop and post op complications were noted.

**Results:** The mean age was 46.05±5.413. The mean operating time was 58.46±17.75 minutes, the mean blood loss was 91.79±27.18 ml and the mean hospital stay was 4.24 ± 0.63 days. Majority (57) of the patients indication of surgery was DUB. 47% of the patients had normal uterine size, 23% and 27% had less than 8 weeks and between 8-12 weeks uterine size respectively. Only 3% subjects had uterus size between 12-36 weeks.Majority subjects had no postoperative complications, whereas other complications like fever , UTI , vaginal bleeding and need for blood transfusion were foundin 06,04,03 ,04 subjects respectively, and none of them had any intra op injury.

***Keywords:*** *Non- descent vaginal hysterectomy, DUB and Fibroid*

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## Introduction

Hysterectomy is a surgical procedure which involves uterus removal usually indicated in > 40 years of age woman, multiparous woman or when associated with benign or malignant conditions[1].Hysterectomies performed for leiomyomas (most common indication),

abnormal uterinebleeding, endometriosis, benign ovarian masses and uterine prolapse have decreasedover time.[5] Due to unavailability of information by large-scale (like whole country wide representative surveys), Data Evidence on prevalence of hysterectomy in India is sparse till recent years. A cross-sectional prevalence survey in2015-2016, National Family Health Survey-4 collected the data on epidemiology of hysterectomy and self- reported reasons for undergoing the procedure for the first time (number of women included in survey -699,686) who were in the reproductive age[6].The state wise data shows Andhra Pradesh being 22.4% followed by its neighboring state Telangana which was 20% were recorded as highest hysterectomies and Lakshadweep, Assam (3.0%) were lowest hysterectomy surgery performing states[6].Women in India, removal of uterus is happens at an early age. As per the first prevalence study of India, NFHS-4 (2015-2016), 3.2 per cent women, between 15-49 years had a hysterectomy. Age-specific prevalence of hysterectomy was 0.36% among women aged 15-29, in women aged 30-39years, it was 3.59% and in 40-49 years, it was 9.20%.[6]Hysterectomies types are broadly divided Abdominal or vaginal based on route of surgery. These two varieties can be further divided into many types based on the route and surgical procedure options like, abdominal/vaginal hysterectomy, total Laparoscopy / laparoscopic assisted vaginal hysterectomy, and robotic assisted laparoscopic hysterectomy, etc[1,2].Abdominal hysterectomy was criticized for, high mean blood loss, morbidity, hospitalization period, and recovery time over other procedures[2].World health organization, Reproductive health library) Summaries based on Cochrane review as, vaginal hysterectomy (VH) showed shorter hospital stay compared to conventional abdominal hysterectomy (AH) and laparoscopic operated hysterectomy (LH). When compared to AH, both VH & LH had statistically equal shorter time to return to normal daily activities.[8]Vaginal Hysterectomy appears to be, relatively advantageous or superior procedure in terms of patient safety, cost-effectiveness, faster recovery (short hospital stay), and dreaded complications. It is the only surgery which has a very good cosmetic benefit that is without any visible scar.[2]

**Aim:** To study the outcomes of Non-descent vaginal hysterectomy in benign gynaecological conditions.

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Material and methods

**Study Area**

The study was conducted among patients attending department of department of obstetrics and gynecology, Sri Siddhartha medical college and hospital research centre, Tumakuru.

**Study Design**

Prospective observational study

**Study Period**

November 2018 to October 2020

**Ethical approval**

Institutional ethical committee approval was obtained prior to the initiation of the study

**Study Population**

All cases with benign gynaecological conditions as per the inclusion and exclusion criteria, attending the OPD or admitted under OBG department, Sri Siddhartha Medical College Hospital and Research center, Tumakuru

**Inclusion Criteria**

1. Uterine size not more than 16 weeks
2. Adequate vaginal access
3. Good uterine mobility

Exclusion Criteria

1. Uterus with restricted mobility
2. Proven malignancy
3. Complex adnexal mass
4. Uterus size more than 16 weeks

5. Nulliparity, PID, previous LSCS

**Sampling method:** Simple random sampling

**Sample Size**

Considering the prevalence of NVDH as 37.68% the sample size was calculated for our study using the formula

$N = 4pq/L^2$ :

Ø p= 37.68%

Ø q= 62.32 (100-p)

Ø L=25%

Sample size works out to 109 subjects with the above formula and with a dropout rate of 5%- 8% the study was rounded off to 100 subjects.

**Study Tools**: Pre-designed pre-tested questionnaire.

## Data Collection Methodology

The subjects were included in the study after their consent. Details were noted and in detail history was also noted. A complete clinical examination was done. Blood and urine samples were collected.

A written informed consent from all patient after explaining the procedure and special consent for conversion to abdominal hysterectomy were taken from the patients. All cases were performed under appropriate anesthesia. All cases were reassessed in operation theatre after anaesthetized to see size of the uterus, mobility of the uterus, laxity of pelvic muscle. If at any time uterine size did not allow an easy exteriorization then debulking techniques like morcellation, bisection, myomectomy or a combination of all this method were done. Intra operative blood loss and post-operative complication like fever, UTI, vaginal cuff cellulitis and vaginal bleeding noted.

**Procedure**

After painting and draping, anterior lip of cervix is held with velsellum. Curved transverse incision is taken on anterior vaginal wall at the lower limit of bladder wall and anterior vaginal wall is pushed up. Pubo-cervical ligament is cut and bladder is pushed up. Incision is extended posteriorly, posterior vaginal wall is separated. Anterior UV fold and posterior cul-de-sac opened. Uterosacral and cardinal ligaments are clamped, cut and ligated bilaterally. Then uterine vessels are clamped cut and ligated bilaterally. Depending on the size of the uterus various debulking procedures are used to deliver the uterus. Final clamp were applied to round ligament, fallopian tube and ovarian ligament together, cut transfixed and ligated. Infundibulopelvic ligament is clamped if oophorectomy is done. Then vaginal vault is closed by continuous interlocking sutures.

## Data Analysis

The collected data was collected, coded, entered into Microsoft excel work sheet and exported to SPSS. Data was analyzed using SPSS version 21. Data is presented as percentage in categories and then presented as tables.

## Results

Table 1 depicts that for majority (57) of the patients indication of surgery was DUB ,whereas for 08 patients it was Endometrial hyperplasia, 1 patient had cervical fibroid, 7 had adenomyosis, for 22 patients indication was fibroid, 1 had endometrial polyp and 1 had FIB+PMB and 01 of them had cervical elongation. According to the above table 2, 47% of the patients had normal uterine size, 23% and 27% had less than 8 weeks and between 8-12 weeks uterine size respectively. Only 3% subjects had uterus size between 12-36 weeks. Table 3 explains shows that out of 100 patients were 13 of them were between 35 to 39 years, 22 were 40 to 44 years and 35 were 45 to 49 years and 30 were above 50 years. The mean operating time was 58.46±17.75 minutes, the mean blood loss was 91.79±27.18 ml and the mean hospital stay was 4.24 ± 0.63 days.Table 4 depicts majority subjects had no postoperative complications, whereas other complications like fever , UTI , vaginal bleeding and blood transfusion were found in 06,04,03 ,04 subjects respectively, and none of them had any intra op injury.

**Table 1: Indication of NDVH**

| Indication | Number of patients | Percentage |
|---|---|---|
| DUB | 57 | 57% |
| Endometrial hyperplasia(aub E) | 08 | 8% |
| Cervical Fibroid | 01 | 1% |
| Adenomyosis | 07 | 7% |
| Fibroid | 22 | 22% |
| Endometrial polyp | 01 | 1% |
| Fibroid + Endometrial hyperplasia | 02 | 2% |
| Cervical Elongation | 01 | 1% |
| Fibroid + PMB | 01 | 1% |
| Total | 100 | 100% |

**Table 2: Distribution of patients according to uterus size**

| **Size (in weeks)** | **Number of patients** | **Percentage %** |
|---|---|---|
| Normal | 47 | 47% |
| < 8 weeks | 23 | 23% |
| 8-12 weeks | 27 | 27% |
| 12-16 weeks | 03 | 3% |
| Total | 100 | 100% |

**Table 3: Comparison of the present study with other studies**

| | **Present study** | **Gayathri et al** | **Chandana et al.** | **Dewan et al** | **Saha et al.** | **Thulasi et al** |
|---|---|---|---|---|---|---|
| Age | | | | | | |
| 35-39 | 13% | 28.5% | 6% | 12% | 30% | 6% |
| 40-44 | 22% | 59% | 55% | 54% | 40% | 55% |
| 45-49 | 35% | 10% | 25% | 20% | 10% | 25% |
| >50 years | 30% | 2.5% | 14% | 14% | 20% | 14% |
| Indication | DUB (57%)<br>Fibroid (22%)<br>Endometrial hyperplasia (8%)<br>Adenomyosis (7%)<br>PMB (1%) | DUB (50%)<br>Endometrial hyperplasia (40%)<br>PMB (9.5%) | DUB (32%)<br>Fibroid (43%)<br>Adenomyosis (9%) | DUB (20%)<br>Fibroid (68%)<br>Adenomyosis (6%) | DUB (26%)<br>Fibroid (46%)<br>Adenomyosis (24%) | DUB (32%)<br>Fibroid (43%)<br>Adenomyosis (9%) |

***Cont...*** **Table 3: Comparison of the present study with other studies**

| | | | | | | |
|---|---|---|---|---|---|---|
| Mean operation time | 58.46±17.75 mins | 90 mins | 70 mins | 54.5 mins | 120 mins | 70 mins |
| Mean blood loss (ml) | 91.79±27.18 ml | 100 ml | 150 ml | 290 ml | 205 ml | 150 ml |
| Mean hospital stay | 4.24 ± 0.63 days | 3 days | - | - | - | - |

**TABLE 4. Post-operative complications:**

| Type | Number of patients | Percentage |
|---|---|---|
| No complication | 83 | 83 |
| Fever | 06 | 6% |
| UTI | 04 | 4% |
| Vaginal bleeding | 03 | 3% |
| Blood transfusion | 04 | 4% |

## Discussion

Non descent vaginal hysterectomy describes a vaginal approach that can be undertaken in absence of uterine prolapse. It is performed entirely through vaginal route and its advantage over abdominal and laparoscopic hysterectomy is well documented. Outcome data of the procedure in a local setting would be helpful for both clinician and patient to consider vaginal approach of hysterectomy. The present study shows 35% of the patients were between 45 to 49 years, 30% were above 50 years and 35% were between 35-44 years, a study by Gayathri et al [6]showed majority of the subjects, 59% were between 40 -44 years followed by 28.5% between 35-40 years. Another study by Chandana et al,[7]Dewan et al,[8]Saha et al [9] and Thulasi et al [10] showed majority i.e 55%, 54%, 40, and 55% subjects were between 40 to 44 years respectively. The most common indication observed in the present study was DUB (57%), fibroids (22%) and adenomyosis (7%). Studied by Gayathri et al [6]showed 50% of the patients indicated was due to DUB, 40% due to endometrial hyperplasia and 9.5% was PMB. Chandana et al,[7]Dewan et al,[8]Saha et al [9] and Thulasi et al [10] suggested 32%, 20%, 26% and 32% patients indication was DUB, 43%, 68%, 46% and 43% for fibroids and 9%, 6%.24% and 9% was adenomyosis respectively. This study showed 475 subjects had normal uterus size 23% < 8 weeks, 27% uterus size was between 8-12 weeks and 3% had uterus size between 12- 16 weeks. Gayathri et al [6] showed 27.5%, 49.5%, and 12% respectively and also reported 10.5% had uterus size above 16 weeks. The mean operating time in the present study was 58.46±17.75 minutes were as Gayathri et al,[6]Chandana et al,[7]Dewan et al,[8]Saha et al [9] and Thulasi et al [10] reported 90, 70, 54.5, 120 and 70 minutes respectively. The present study mean blood loss was 91.79±27.18 ml which was close enough to the study done by Gayathri et al that reported 100ml blood loss. The other studies by Chandana et al,[7]Dewan et al,[8]Saha et al [9] and Thulasi et al [10] reported 150 ml, 290 ml, 205 ml and 150 ml respectively. The mean hospital stay was 4.24 ± 0.63 days were as Gayathri et al [6] reported a mean of 3 days hospital stay. In this study majority subjects had no postoperative complications, whereas other complications like fever , UTI , vaginal bleeding and blood transfusion were found and there was no intra op complications.Other study conducted by Arifa et al[11] there were minor complications of the procedures like UTI, vaginal cuff infection, blood transfusion ,bladder injury.Also in a study conducted by Elizabeth et al[12]

there were postoperative complications with 02, subjects had UTI, 09 subjects had perioperative blood transfusion and 01 patient having bladder injury

## Conclusion

The results obtained from this study showed majority of subjects were 65% were above 45 years. The most common indication was DUB followed by fibroids, endometrial hyperplasia and adenomyosis. The uterus size was normal in 47% subjects. The mean operating time was 58.46±17.75 mins, the mean blood loss was 91.79±27.18 ml and mean hospital stay was 4.24 ± 0.63 days. It can be concluded also concluded Vaginal Hysterectomy is least invasive route and it is associated with rapid postoperative recovery. Less intraoperative blood loss, less duration of surgery and less duration of hospital stay depicts that vaginal route should be the choice of operation in non descent cases.

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