

# Clinical study of non-descent vaginal hysterectomy and its outcome at a tertiary hospital

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## Abstract

**Background:** Hysterectomy is the most common major gynecological surgical procedure. The vaginal route has many advantages like better intra and post-operative course, less analgesic need, less postoperative stay and improved pain scores. Present study was aimed to study non-descent vaginal hysterectomy (NDVH) for benign gynaecological indications and its outcome at a tertiary care center. **Material and Methods:** Present study was hospital based, prospective, observational study, conducted in patients with benign gynaecological conditions, posted for non-descent vaginal hysterectomy (NDVH). **Results:** During study period, 78 cases were posted for NDVH. All cases were completed through vaginal route only. Majority of patients were of 51-60 years age (42.31%), had parity 2 (62.82%). Common indications for NDVH were dysfunctional uterine bleeding (30.77 %), fibroid (19.23 %), adenomyosis (26.92 %), cervical polyp (8.97 %), endometrial polyp (7.69 %) and postmenopausal bleeding (6.41 %). Common uterine size was 8-10 weeks (62.82 %) followed by 10-12 weeks (20.51 %). Various morcellation techniques used to deliver uterus were bisection (37.18 %), bisection + myomectomy (14.10 %), debulking (11.54 %), bisection + polypectomy (8.97 %), coring (6.41 %) and myomectomy (2.56 %). Mean hospital stay was  $4.8 \pm 2.1$  days. Surgical Complications noted were vault hematoma (1.28 %), febrile morbidity (5.13 %), secondary hemorrhage (1.28 %) and urinary tract infections (2.56 %). All complications were managed conservatively. **Conclusion:** Non-descent vaginal hysterectomy is done through natural orifice and thus there is avoidance of an abdominal wound which is a remarkable advantage and has shorter hospital stay and faster convalescence. **Keywords:** Non-descent vaginal hysterectomy, NDVH, minimally invasive surgery, DUB

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## INTRODUCTION

Hysterectomy is the most common major gynecological surgical procedure. It can be done by abdominal or vaginal or laparoscopic route. Factors that influence the route of

hysterectomy for benign diseases include the size and shape of the vagina and uterus; accessibility to the uterus; extent of extra uterine disease, the need for concurrent procedures, surgeon's training and experience, available hospital technology, devices and support.<sup>1</sup> Abdominal hysterectomy was criticized for, high mean blood loss, morbidity, hospitalization period, and recovery time over other procedures.<sup>1,2</sup> The vaginal route has many advantages like better intra and post-operative course, less analgesic need, less postoperative stay and improved pain scores. Vaginal hysterectomy is the approach of choice whenever feasible, based on its well-documented advantages and lower complication rates.<sup>3</sup> Cochrane review of 34 randomized trials and ACOG committee on Gynecologic Practice concluded that NDVH is the approach of choice whenever feasible, based on its well

documented advantages and lower complication rates.<sup>4</sup> Present study was aimed to study non-descent vaginal hysterectomy (NDVH) for benign gynaecological indications and it's outcome at a tertiary care center.

### MATERIAL AND METHODS

Present study was hospital based, prospective, observational study, conducted in department of obstetrics and gynaecology, at Melmaruvathur Adhiparasakthi Medical College And Hospital, Kanchipuram, India. Study duration was of 2 years (July 2019 to June 2021). Institutional ethical committee approval was obtained prior to the initiation of the study

**Inclusion criteria:** Patients with benign gynaecological conditions, posted for non-descent vaginal hysterectomy (NDVH), willing to participate in study

**Exclusion criteria:** Patients with restricted uterine mobility, Nulliparity, PID, previous LSCS. Patients with

malignancy, complex adnexal mass. Uterine size more than 16 weeks

Study was explained in local language and written consent taken for participation. Patients demographic, clinical details were noted and thorough clinical examination was done.

Investigations such as CBC, urine (R/M), LFT, RFT, ECG, chest X ray, USG (A + P) were done. Patients were posted after anaesthetic fitness and written consent for surgery. All cases were performed by senior gynaecologist (had experience > 10 years), under appropriate anaesthesia. All cases were reassessed in operation theatre after anaesthetized to see size of the uterus, mobility of the uterus, laxity of pelvic muscle. During surgery, various 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. Data was collected and compiled using Microsoft Excel, analysed using SPSS 23.0 version. Statistical analysis was done using descriptive statistics.

### RESULTS

During study period, 78 cases were posted for NDVH. All cases were completed through vaginal route only. Majority of patients were of 51-60 years age (42.31%), had parity 2 (62.82%), had comorbidities such as hypertension (29.49 %), diabetes mellites (17.95 %), bmi > 25 kg/m<sup>2</sup> (17.95 %) and previous abdominal surgeries (16.67 %).

**Table 1:** General characteristics

Characteristics	Number of patients	Percentage
Age		
41-45	11	14.10%
46-50	32	41.03%
51-60	33	42.31%
> 60	2	2.56%
Parity		
1	21	26.92%
2	49	62.82%
3	8	10.26%
Co-morbidities		0.00%
Hypertension	23	29.49%
Diabetes Mellites	14	17.95%
BMI > 25 kg/m <sup>2</sup>	14	17.95%
Previous abdominal surgeries	13	16.67%

In present study common indications for NDVH were dysfunctional uterine bleeding (30.77 %), fibroid (19.23 %), adenomyosis (26.92 %), cervical polyp (8.97 %), endometrial polyp (7.69 %) and postmenopausal bleeding (6.41 %).

**Table 2:** Indications of surgery

Surgical indication	Number of patients	Percentage
Dysfunctional uterine bleeding	24	30.77%
Fibroid	15	19.23%
Adenomyosis	21	26.92%
Cervical polyp	7	8.97%
Endometrial polyp	6	7.69%
Postmenopausal bleeding	5	6.41%

Common uterine size was 8-10 weeks (62.82 %) followed by 10-12 weeks (20.51 %).

**Table 3: Uterine size**

Size Of Uterus (weeks)	Number of patients	Percentage
8-10	49	62.82%
10-12	16	20.51%
12-14	9	11.54%
14-16	3	3.85%
>16	1	1.28%

Various morcellation techniques used to deliver uterus were bisection (37.18 %), bisection + myomectomy (14.10 %), debulking (11.54 %), bisection + polypectomy (8.97 %), coring (6.41 %) and myomectomy (2.56 %).

**Table 4: Morcellation Techniques**

Size Of Uterus (weeks)	Number of patients	Percentage
Bisection	29	37.18%
Bisection + Myomectomy	11	14.10%
Debulking	9	11.54%
Bisection + Polypectomy	7	8.97%
Coring	5	6.41%
Myomectomy	2	2.56%

Mean hospital stay was  $4.8 \pm 2.1$  days. Surgical Complications noted were vault hematoma (1.28 %), febrile morbidity (5.13 %), secondary hemorrhage (1.28 %) and urinary tract infections (2.56 %). All complications were managed conservatively.

**Table 5: Surgical Complications**

Complications	Number of patients	Percentage
Vault hematoma	1	1.28%
Febrile morbidity	4	5.13%
Secondary hemorrhage	1	1.28%
Urinary tract infections	2	2.56%

## DISCUSSION

Hysterectomy can be accomplished by various routes and the approach to it via the natural vaginal route has been the hallmark of gynecological surgeon and usually performed for uterine prolapse.<sup>5</sup> The usual contraindications for vaginal hysterectomy are absence of significant uterovaginal prolapse, presence of uterine enlargement, adhesions and the need for oophorectomy. In case of uteri enlarged due to fibroids, techniques like bisection, myomectomy, wedge resection, slicing method, coring and use of Ligasure Vessel sealing system, may be used either individually or in combination for successful removal of the uterus vaginally.<sup>6</sup> In study by Saha R *et al.*,<sup>7</sup> out of 50 cases, 43 cases successfully underwent non-descent vaginal hysterectomy. Commonest age group was 41-45 years (40%), uterus size was <10 weeks in 27 cases and >10 weeks in 23 cases. Commonest indication was leiomyoma of uterus (63%). Mean duration of surgery was two hours. Mean blood loss was 205.26ml. Reasons for failure to perform NDVH was difficulty in opening pouch of Douglas in three cases. In rest of four cases there was difficulty in reaching the myoma and transverse diameter was too large so as to prevent descent of the uterus. Somani, *et al.*,<sup>8</sup> noted that, out of 50 cases, 92% of cases

had no intraoperative complications were found suggesting low morbidity associated with the procedure. Hemorrhage requiring blood transfusion was found in 4% of cases. Average operative time was  $61.2 \pm 27.89$  min, average blood loss was  $170 \pm 81.44$  ml, and average hospital stay was  $5.94 \pm 4.95$  days. On histopathological examination, 40% were having leiomyoma and dysfunctional uterine bleeding was seen in 22% of cases. Pain was the most common complication seen in 30% of cases while vaginal discharge was seen in just 4% of cases. About 80% of patients were discharged on post-operative day 5. Kiran Khemani *et al.*,<sup>9</sup> studied 120 cases, majority were in the age group of 41-45 years (46.7%). Most common indication for hysterectomies were Abnormal uterine bleeding (AUB) (45%), followed by fibroid uterus (25%). The mean duration of surgery time taken was 60+10 minutes. Majority of the women who underwent hysterectomies had bulky uterus (70%). Complications were very few. Fever, UTI (urinary tract infection) and headache were seen in 5% cases. A study conducted on 80 women for NDVH by Kumar *et al.*,<sup>10</sup> had a success rate of 95% and the operating time, laparotomy conversion rate 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. Vaginal hysterectomy is also known as minimal bowel hysterectomy. The morbidity associated with abdominal incisions viz, infection, dehiscence, evisceration, discomfort or hernia and above all a scar are avoided. In vaginal hysterectomy, there is decreased post op morbidity and early ambulation.<sup>11</sup> But choice of approach for any hysterectomy should be based on the surgical indication, the patient's anatomical condition, data supporting the approach, informed patient preference, and the surgeon's expertise and training. Also, proper selection of patients is a critical factor in determining the success of vaginal procedures. Lack of expertise and the curve in learning the technique also has major impact on the number of procedures performed.<sup>12</sup> New developments such as fiber optic light source, longer instruments for obese patients etc. combined with existing methods of uterine morcellation may now allow many larger uteri to be removed vaginally.

## CONCLUSION

Non-descent vaginal hysterectomy is done through natural orifice and thus there is avoidance of an abdominal wound which is a remarkable advantage and has shorter hospital stay and faster convalescence. In present era of minimally invasive surgery, non-descent vaginal hysterectomy in properly selected patients seems to be a safe and feasible option for hysterectomy.

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