

## Original article

# Non Descent Vaginal Hysterectomy (NDVH): Our experience at a tertiary care centre

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### Abstract:

**Aims:** To report our experience of non descent vaginal hysterectomy (NDVH) of 50 cases.

**Methods:** All patients requiring hysterectomy for benign gynecological disorders without prolapse (DUB, fibroid, adenomyosis, PID, etc) underwent non descent vaginal hysterectomy in a study period of two years. Prerequisites for non descent vaginal hysterectomy were set as uterine size not exceeding 16 weeks of gravid uterus, adequate access with good uterine mobility. Morcellation techniques like bisection, myomectomy, wedge debulking were employed in bigger sized uterus.

**Key Words:** non descent vaginal hysterectomy, morcellation.

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### Introduction

Hysterectomy is one of the most commonly performed gynaecological operative procedures. It can be done by several ways like abdominal, vaginal, laparoscopic route and with robotic assistance. Skill & experience of the surgeon plays an important role in determining approach route. Factors to be considered in choosing the route for hysterectomy should include safety, cost-effectiveness and the medical needs of the patient.<sup>1</sup>

Conrad Lagenbeck of Gottingen performed the first planned vaginal hysterectomy in 1813.<sup>2</sup> It is rightly said that father of non descent vaginal hysterectomy (NDVH) in modern India is Sheth with his experience of 5655 vaginal hysterectomies done from 1967 to 2001.<sup>3</sup> Superiority of hysterectomy by vaginal route is generally accepted, but still most of the gynecologists use this route only for uterine prolapse, preferring abdominal hysterectomy for

other indications. Most of us find it easier to perform abdominal hysterectomy through a wide-open incision and find excuses to avoid vaginal route.

Laparoscopic route is enjoying much popularity in these two decades. However, laparoscopic hysterectomy is associated with higher costs, longer duration of surgery, specially trained personnel and risks related to laparoscopy.<sup>4</sup> Vaginal route of hysterectomy is associated with fewer morbidities, lesser hospital stay and better patient satisfaction. Therefore there is a need for expanding the indication for vaginal hysterectomy rather than restricting it to the conventional indication of uterovaginal prolapse. The common limitations for vaginal hysterectomy in nonprolapsed uterus (NDVH) include size of the uterus, nulliparity, previous pelvic surgery or lower segment caesarean section (LSCS), pelvic adhesions and endometriosis.<sup>5</sup> But now vaginal hysterectomy in larger sized uterus is facilitated by bisection,

myomectomy, bisection debulking, coring and clampless approach.<sup>6</sup>

The aim of the present study was to report our experience of performing non-descent vaginal hysterectomy (NDVH) for benign gynaecological indications at a tertiary care centre.

### **Materials and Methods**

The study was approved by the Ethics Committee of PDVVPF's Medical College & hospital, Ahmednagar. The study was conducted over 2 years from May 2012 to April 2014. Patients requiring hysterectomy for benign gynecological disorders without prolapse (DUB, fibroid, adenomyosis, PID, etc) were posted for non descent vaginal hysterectomy. Prerequisites for non descent vaginal hysterectomy were set as uterine size not exceeding 16 weeks of gravid uterus, adequate access with good uterine mobility. Exclusion criteria were uterus with severely restricted mobility, suspicion of malignancy, complex adnexal mass, more than previous 2 caesarean sections and endometriosis. All these patients were admitted in Gynaec ward after proper history taking, general examination and systemic examination. Pelvic examination was done to assess size and position of uterus, degree of descent, mobility of uterus, vaginal capacity was noted. The patients were undergone investigations like CBC, RFT, LFT, blood group, BT, CT, PAP smear, USG abdomen & pelvis, chest X-ray, ECG in wards for surgical fitness. A written informed consent was taken from patient.

### **Operative Technique:**

All cases were done under spinal anaesthesia. Lithotomy position was given. Cleaning, painting of

the parts and draping were done. Cervix was held with vulsellum. Circumferential incision was taken around the cervix, pubo-vesico-cervical ligament was cut and bladder pushed upwards. Posterior pouch was opened first followed by anterior one. Uterosacral and Mackenrodt's ligaments were clamped, cut and ligated on both the sides. Uterine vessels were clamped, cut, ligated bilaterally. After this moderately big uterus required morcellation techniques like uterine bisection, bisection with myomectomy and wedge resection. Morcellation was done after ligation of both the uterine pedicles. Lastly uterine cornual structures containing round ligament, ovarian ligament and fallopian tube were clamped, cut & ligated to deliver specimen out.

Data regarding age, parity, uterine size, estimated blood loss, length of operation, complications and hospital stay were recorded. All patients received prophylactic antibiotics. Postoperative Foley's catheterization was done in all cases for 24 hours. Patients were observed for post operative complications and documented relevantly.

### **Results**

During study period total 50 cases of NDVH were operated for different indications. Data was collected and following tables were made.

Table 1 shows various indications for which non descent vaginal hysterectomy (NDVH) was performed. It shows that dysfunctional uterine bleeding not responding to conservative treatment (52%) was the commonest indication for NDVH followed by fibroid (22%), adenomyosis (16%).

**Table 1. Indications of NDVH**

Sr no	Indication	Number of patients	Percentage
1	Dysfunctional uterine bleeding	26	52
2	Fibroid	11	22
3	Adenomyosis	8	16
4	Cervicitis/dysplasia	2	4
5	Pelvic inflammatory disease	3	6

30 cases (60%) were in the age group 41- 45yrs. Only 2 patients were below the age of 40 years.

**Table 2. Distribution of age**

Sr no	Age group (years)	Number of patients	Percentage
1	35-40	2	4
2	41-45	30	60
3	46-50	10	20
4	>50	8	16

Table 3 shows distribution of cases according to the parity. 24 cases (48%) had parity three. 12 cases (24%) had parity 4 & more.

**Table 3. Distribution of parity**

Sr no	Parity	Number of patients	Percentage
1	1	3	6
2	2	11	22
3	3	24	48
4	4 & more	12	24

**Table 4. Size of the uterus**

Sr no	Size of uterus(weeks)	Number of patients	Percentage
1	Upto 8 weeks	32	64
2	8-14 weeks	16	32
3	>14 weeks	2	4

Table 4 shows size of the uterus. Most of the cases were having uterus size less than 8 weeks i.e.32 cases (64%). Only 2 cases (4%) were having uterus size more than 14 weeks.

Table 5 shows clinical outcome. Mean operating time was 64 minutes. Mean blood loss was 100 ml. Only 2 cases required blood transfusion. Operating time & blood loss were directly proportional to the size of uterus & presence of fibroid. Most of the patients were discharged in 4 days.

**Table 5. Clinical outcome**

Sr no	Clinical outcome	
1	Mean operating time	64 minutes
2	Mean blood loss	100 ml
3	Mean hospital stay	4 days

Table 6 shows about half of the cases required morcellation procedure to remove specimen out like bisection (24%), bisection with enucleation of myoma(18%) and wedge resection(8%).

**Table 6. Morcellation performed**

Sr no	Method of morcellation	No of patients	%
1	Bisection	12	24
2	Bisection with enucleation of myoma	9	18
3	Morcellation/wedge resection	4	8
	Total	25	50

Table 7 shows different intra & post-operative complications. In this study bowel, bladder & ureteric injuries were nil. No major morbidity was observed

**Table 7. Complications**

Sr no	Complications	Number of patients	Percentage
1	Bladder Injury	0	0
2	Ureteric Injury	0	0
3	Bowel Injury	0	0
4	Primary hemorrhage	0	0
5	Secondary hemorrhage	0	0
6	Pelvic hematoma	0	0
7	Pelvic abscess	0	0
8	Febrile morbidity	1	2
9	Urinary tract infections	2	4
10	Urinary tract fistula	0	0
11	Anaesthetic complication	0	0

## Discussion

Abdominal route is the most commonly opted route for hysterectomy. Thomas G Stovall et al found that 70% to 80% of hysterectomies are performed by abdominal route and vaginal approach is usually reserved for utero-vaginal prolapse.<sup>7</sup> With adequate vaginal access and good uterine mobility, vaginal hysterectomy can be easily performed. Initial descent can be obtained by cutting Mackenrod's & uterosacral ligaments. Most common indication of NDVH in our study was dysfunctional uterine bleeding not responding to conservative treatment (52 %) and second most common indication was fibroid (22%). Shital Mehta et al, Bhadra B et al also reported DUB as a most common indication.<sup>8,9</sup> Most common age group underwent for non descent vaginal hysterectomy was 41-45 years (60%). This was similar to studies of Bhadra B et al & Aloknanda Ray et al.<sup>9,10</sup> Maximum number of cases had parity 3 & more (72%). Multiparity was the favourable factor, as it was associated with increased comfort and ease during operation, because of laxity of ligaments, uterine mobility & roomy vagina. In majority of cases in our study, uterine size was less than 8 weeks (64%). Mean time for operation in this study was 64 minutes. Mean blood loss was 100 ml. Only 2 cases required blood transfusion. Operating time & blood loss were directly proportional to the size of uterus & presence of fibroid. Most of the patients were discharged within 4 days. The stay was shorter than the average stay of 7-8 days for abdominal hysterectomy in our hospital. Hospital stay of 2-5 days is reported in other studies.<sup>11,12</sup>

In 50 % cases morcellation procedure was required. In other studies morcellation was required in 79.74%<sup>9</sup>, 75%<sup>13</sup> cases. Morcellation procedure

was single most important factor facilitating removal of moderately large sized uterus. Different morcellation techniques like bisection, bisection with myomectomy & wedge resection were used in this study. One can safely use morcellation procedure, once bilateral uterine vessels are ligated. Nowadays Fibroid up to 16week size and adnexal pathology can be also removed vaginally by using different morcellation techniques.<sup>14,15</sup> We did not encounter any bladder, ureteric or bowel injury. In one study of 3076 vaginal hysterectomies, it was found that the incidence of urinary and intestinal tract injuries was 1.7 and 0.5% respectively.<sup>16</sup> Operative injuries during vaginal hysterectomy are relatively rare. They are easily recognized and treated during the primary operation without important sequelae.

Advantages of doing NDVH over abdominal hysterectomy are absence of scar, no adhesions, no risk of incisional hernia, no wound gape and associated uro-gynecological procedures can also be performed. Operative time, blood loss, anaesthetic complications, chance of injury to bowel, bladder and ureter, bowel handling leading to paralytic ileus is lesser than abdominal approach. Shorter hospital stay, fast recovery, low cost, less thrombo-embolic phenomena, less mortality and morbidity are other merits of the vaginal approach.<sup>17,18</sup>

## Conclusion

Thus, this study concludes that non descent vaginal hysterectomy is feasible, safe and confirms utility for the moderately enlarged uterus up to 14 weeks. Though vaginal hysterectomy is possible for the uterus of more than 14 weeks size, but needs good surgical expertise in morcellation techniques. A combination of morcellation techniques is often needed and the surgeon needs to be famili

them. With experience, operative time, blood loss and complications can be reduced considerably. Thus this scarless approach having definite advantages should be selected as a preferred route of

hysterectomy, rather restricting it for conventional indication of utero-vaginal prolapse. Also there is a need of a time for a modern gynaecologist to master this technique in advancing gynaecological practice.

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