



**ORIGINAL RESEARCH PAPER**

**Obstetrics & Gynaecology**

**THE ART OF SCARLESS AND SUTURELESS HYSTERECTOMY**

**KEY WORDS:**

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**ABSTRACT**

**INTRODUCTION** – The emphasis on minimally invasive surgery in present times has led to a resurgence of interest and importance of vaginal hysterectomy for non-prolapsed indications also, ie, Non-descent vaginal hysterectomy (NDVH). Sutureless technique has been performed in our study.

**OBJECTIVE** - The objective of the current study is to report the personal experience and feasibility in performing NDVH vaginally.

**MATERIALS AND METHODS** - A total of 200 cases performed in the department of Gynaecology at NRIGH from January 2015 to April 2019 were taken. Patients with benign indications with uterine size upto 20 weeks and a few with previous surgeries and other medical comorbidities were included. The operating time, blood loss, different surgical techniques, intra operative, post operative complications and postoperative hospital stay were the parameters noted.

**RESULTS** - Of the 200 cases performed, NDVH was successfully performed in 187 cases and 13 were converted into Abdominal hysterectomy. Uterine size was  $\geq 12$  weeks in 68 cases and  $< 12$  weeks in 132 cases. The duration of the surgery ranged from 20 minutes to 2hrs 15mins. Bissection was the most common surgical technique used. Blood loss was  $< 50$  ml in 53% of cases. Majority of the patients were discharged on POD-3. Blood transfusion was required in 8 cases intra-operatively and 5 cases post-operatively.

**CONCLUSION** - NDVH is less invasive, more feasible, economical and the natural route of hysterectomy for greater efficacy and faster recovery in benign gynaecological conditions. For successful outcome, size and mobility of the uterus, location of the fibroid, and most importantly, surgical skill is required.

**INTRODUCTION-**

Hysterectomy (abdominal, vaginal or laparoscopic assisted vaginal hysterectomy and total laparoscopic hysterectomy) is the most commonly performed elective major gynaecological surgery.<sup>1</sup>

Rate of hysterectomy varies between 6.1 and 8.6/1000 women of all ages.<sup>2</sup>

In 2003, hysterectomy rate of 5.38 per 1000 female U.S. residents was reported from data derived from health care and utilization project. The most recent analysis of health care cost and utilization project data showed that abdominal hysterectomy was performed in 66% of cases, vaginal route in 21.8% and laparoscopic route by 11.8%.<sup>3</sup>

Famous French surgeon, Doyen insisted that no one could call himself a gynaecologist until he performed vaginal hysterectomy.<sup>4</sup>

The gynaecologic surgeon should not only technically adapt these various procedures but also use history, physical examination and discussion with the patient to match the surgical procedure to the patient in order to obtain the most satisfactory outcome.<sup>5</sup>

Familiarity with vaginal surgery is a distinguishing hallmark between gynaecologists and general surgeons.<sup>6</sup>

The current ratio of abdominal to vaginal hysterectomy is 3:1 for the treatment of benign disorders. The ratio should be reversed because fewer post operative complications are associated with the vaginal route, which allows earlier recovery and return to work.<sup>7</sup>

When hysterectomy is to be undertaken, every gynaecologist should first consider the vaginal hysterectomy because it is

easy to approach and the uterus is accessible and therefore comfortable from the surgeon's viewpoint.

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 resulting in better post operative quality of life.

According to ACOG guidelines, Vaginal hysterectomy is the approach of choice wherever feasible and has proved better outcomes compared to the other routes.

Non descent vaginal hysterectomy (NDVH) is being performed by suturing and clamping usually.

SUTURELESS technique with electrocautery has been used in our study.

**OBJECTIVE-**

NDVH which is an age old and time tested procedure is being sidelined in recent times.

My objective is to report the personal experience and feasibility of performing the popular NDVH.

To maximize the proportion of hysterectomies being performed vaginally and to convey its advantages over the abdominal route.

**MATERIALS AND METHODS-**

A total of 200 cases performed in a single unit in the department of Gynaecology at NRIGH from January 2015 to April 2019. Patients with benign indications with uterine size upto 20 weeks and a few with previous surgeries and

some with adnexal pathology and other medical comorbidities were included. The operating time, blood loss, different surgical techniques, intra operative, post operative complications and postoperative hospital stay were the parameters noted.

**INCLUSION CRITERIA-**

- Benign uterine conditions
- Non descent uterus
- Uterine size upto 20 weeks
- Those with previous abdominal surgeries (caesareans- upto 3 previous LSCS)
- Some with adnexal pathology (simple ovarian cyst, hydrosalpinx)

**EXCLUSION CRITERIA-**

- Suspicion of genital malignancy
- Any degree of uterine descent
- Uterine size beyond 20 weeks
- Complex ovarian cyst
- Any significant bleeding disorders

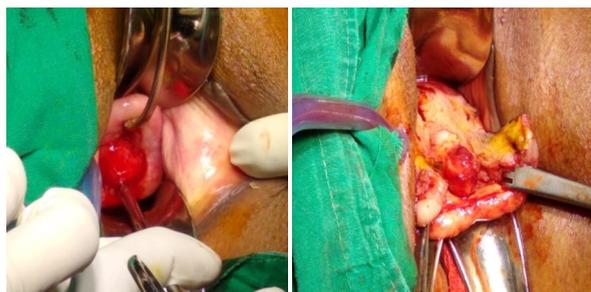
**PROCEDURE-**

- Anterior and posterior vaginal walls retracted with Sim's speculum.
- Anterior lip of cervix is held with vulsellum.
- A circular incision is given at the cervico- vaginal junction
- Vesicocervical ligament coagulated with bipolar forceps and cut with scissors.
- Posteriorly cul-de-sac is incised, posterior peritoneal entry made.
- If anterior entry is not possible at this step, bilateral uterosacrals, cardinal and uterine arteries are coagulated and cut and then UV fold is opened.
- Rest of the broad ligament is coagulated and cut.
- The cornual structures (tube, round ligament, utero ovarian ligament) are then coagulated and cut to remove the uterus,
- The infundibulopelvic ligament is coagulated and cut for removing the entire adnexa.
- In cases where cornual structures were not reached easily, uterine debulking was done.
- Uterine bissection was done in most of the cases and fibroid enucleation and coring in a few.
- Hemostasis secured.
- Vaginal vault is closed with vicryl no.1 in intermittent sutures.
- Foleys is inserted and vaginal packing is done.

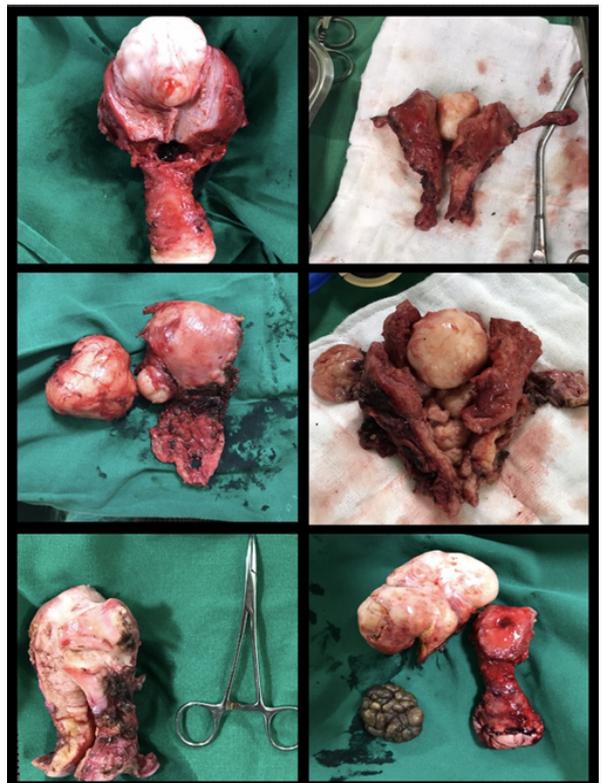
**INDICATIONS FOR SURGERY-**

- AUB – Polyp (P) – 11 cases
- AUB – Adenomyosis (A) – 29 cases
- AUB – Leiomyoma (L) – 107 cases\*
- Postmenopausal bleeding – 19 cases
- CIN – 6 cases

**POLYPS**



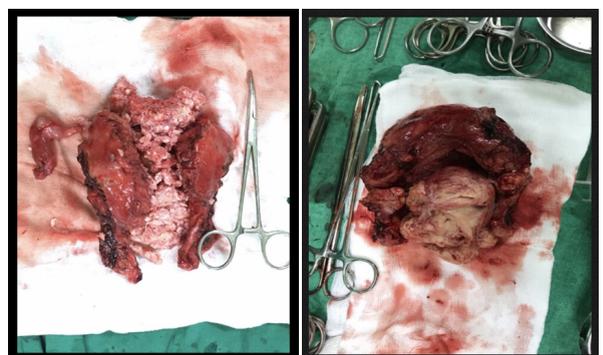
**FIBROIDS**



**MULTIPLE FIBROIDS**



**ADENOMYOSIS**



**PARAMETERS-**

- Uterine size
- Previous number of surgeries
- Medical comorbidities

- Adnexal pathology
- Surgical techniques
- Intraoperative blood loss
- Operative time
- Ambulation and oral intake
- Postoperative complications
- Conversion to abdominal route
- Postoperative hospital stay

**DISCUSSION AND RESULTS- UTERINE SIZE**

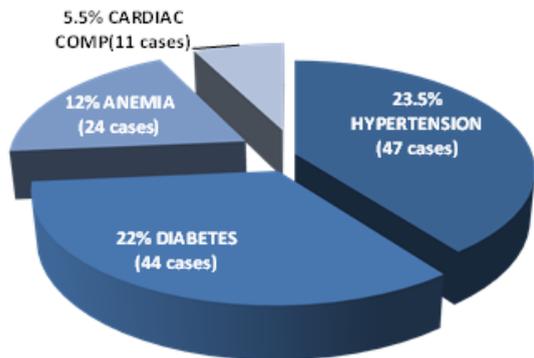
| UTERINE SIZE | NO. OF CASES OUT OF 200 | %    |
|--------------|-------------------------|------|
| < 12 weeks   | 132                     | 66 % |
| > 12 weeks   | 68                      | 34 % |

Uterine size was <12 weeks in 132 cases and >12 weeks size in 68 cases of 300 cases.

**PREVIOUS SURGERIES-**

- 1 previous LSCS 13 cases
- 2 previous LSCS - 16 cases
- 3 previous LSCS - 4 cases

**MEDICAL COMORBIDITIES**



Hypertension and Diabetes mellitus were the most common medical comorbidities followed by Anemia.

Hypertension was seen in 23.5 % of the cases.  
 Diabetes mellitus was seen in 22 % of the cases.  
 Anemia was seen 12 % of the cases.  
 Cardiac complications were seen in 5.5% of the cases.

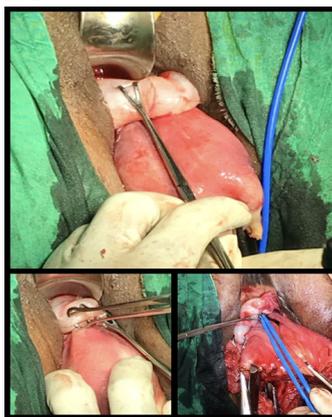
**ADNEXAL PATHOLOGY**

|                              |          |
|------------------------------|----------|
| B/L SALPINGECTOMY            | 16 cases |
| OVARIOTOMY                   | 11 cases |
| BILATERAL SALPINGOOVARIOTOMY | 16 cases |

**HYDOSALPINX**



**OVARIAN CYST**



Surgery for adnexal pathology was done in 43 cases of which 16 cases underwent bilateral salpingectomy, 11 cases underwent ovariectomy for ovarian pathology and 16 cases underwent bilateral salpingoovariotomy for tubal and ovarian pathology.

**Salpingo-oophorectomy**

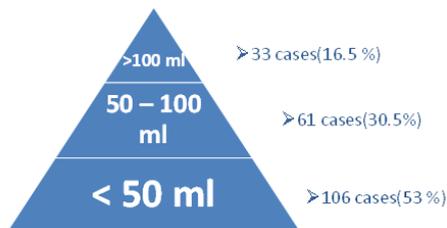


**DEBULKING TECHNIQUES-**

- Uterine Bisection - 104 cases (52%)
- Fibroid enucleation - 21 cases (10.5%)
- Coring - 9 cases (4.5%)



**INTRAOPERATIVE BLOOD LOSS**



Blood loss was found to be <50 ml in 106 cases(53%),50-100 ml in 61 cases(30.5%),>100 ml in 33 cases(16.5%)

**OPERATIVE TIME –**

- Least time :25 minutes
- Maximum time :2hrs 40 mins
- Mean operative time :50 minutes

**AMBULATION AND ORAL INTAKE -**

- Majority were ambulated and started on oral fluids on the same evening of the surgery. (Post operative day –0)

**OPERATIVE COMPLICATIONS –**

- Intraoperative
- Blood transfusion – 8 cases
- Bladder injury – 1 case
- Postoperative
- Blood transfusion – 5 cases

**CONVERSION TO ABDOMINAL ROUTE**

- 13 cases were converted into abdominal route.

| Cause for conversion          | Number of cases |
|-------------------------------|-----------------|
| Large fibroid (18-20 weeks)   | 5               |
| Adhesions (uterovesical)      | 5               |
| Huge ovarian mass (10*10 cms) | 2               |
| Bladder injury                | 1               |

13 cases were converted into abdominal route after attempting vaginal hysterectomy.

5 cases had large fibroids with uterine size upto 20 weeks, 5 cases had dense uterovesical adhesions, 2 cases had large ovarian mass of 10\*10 cms, 1 case out of 200 cases had bladder injury due to previous 2 LSCS.

**POSTOPERATIVE HOSPITAL STAY**

| No of days postop. | No of cases | %      |
|--------------------|-------------|--------|
| 3 days             | 151         | 75.5 % |
| 5 days             | 33          | 16.5 % |
| 8 days             | 15          | 7.5 %  |
| 10 days            | 1           |        |

75% of the patients had a postoperative hospital stay for 3 days.

16.5% of the patients had a postoperative hospital stay for 5 days.

7.5% of the patients had a postoperative hospital stay for 8 days.

Only 1 case had a postoperative hospital stay of 10 days due to bladder injury.

**CONCLUSION -**

- Less blood loss
- Avoids the disadvantages of an abdominal incision
- Less intraoperative and postoperative complications
- Cosmetic advantage with no visible scar
- Shorter postoperative stay
- Early ambulation and oral intake
- Vaginal hysterectomy is the easiest route in obese individuals.
- In patients with associated medical complications like diabetes mellitus, anemia, hypertension, cardiac complications, etc., NDVH is superior.
- Inflammation is less due to less use of suture material.
- NDVH is minimally invasive, more feasible, economical and effective for benign gynaecological conditions.
- For successful outcome, size and mobility of the

uterus, location of fibroid and most importantly surgeon's skill is required.

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