



## STUDY OF SAFETY & FEASIBILITY OF NON DESCENT VAGINAL HYSTERECTOMY IN BENIGN GYNAECOLOGICAL CONDITIONS BOTH IN SIMPLE AND DIFFICULT SCENARIOS

### KEYWORDS

non descent vaginal hysterectomy(NDVH), scarred uterus, bisection ,debulking.

### DR.B.TAMILSELVI

M.D.D.G.O, Professor of Obstetrics And Gynaecology, Deputy Director, Institute Of Social Obstetrics And Govt Kasturba Gandhi Hospital , Madras Medical College,The Tamilnadu Dr.M.G.R.Medical University, Chennai-600 005

### DR.E.VIJAYALAKSHMI

Senior Assistant Professor of Obstetrics And Gynaecology, Institute Of Social Obstetrics And Govt Kasturba Gandhi Hospital, Madras Medical College, The Tamilnadu Dr.M.G.R.Medical University, Chennai-600 005

### ABSTRACT

**Objective:** This study was undertaken to check the feasibility of vaginal route as the primary route for hysterectomy for benign conditions with non descent of uterus. **Methods:** During 2013-2016 nondescent vaginal hysterectomies with or without bilateral salpingoophorectomy were performed in 166 women with benign conditions. Severe endometriosis, immobility of the uterus, uterine size more than 18 weeks and malignancy were excluded. Patients were classified into two groups - Group I - uterine size up to 12 weeks, with no risk factors and Group II - uterine size 12-18 weeks or with confounding factors like, mild to moderate endometriosis, nulliparity or LSCS in the past. The outcome was analysed **Results:** Age, parity, indications, operative technique, hospital stay, post operative complications were studied and analysed statistically. **Conclusion:** vaginal hysterectomy is feasible and more safe for benign conditions with non descent of uterus even in difficult scenarios.

### INTRODUCTION:

The controversy on whether the uterus should be removed abdominally or vaginally was started when Langenbeck performed the first vaginal hysterectomy in 1813. Ardent supporters like Green Armytage, Stallworthy in the west and Mitra, Purandare and Sheth in the east supported vaginal hysterectomy. Sheith wrote an excellent article highlighting the technique and advantages of vaginal hysterectomy for the non-prolapsed uterus. This article sparked the resurgence of vaginal hysterectomy in many teaching institutions in India and abroad.

NDVH (Non descent vaginal hysterectomy) is removal of uterus through vagina in the absence of descent. Since this surgery is performed through natural route it is better preferred. As a result of increasing caesarian section the vaginal hysterectomy difficultities due to bladder adhesions are also overcome by **lateral window technique** followed nowadays. Expertise of the surgeon counts a great in dealing with difficult scenarios. This study will help in assessing the safety and feasibility of non descent vaginal hysterectomy in easy and difficult cases.

### MATERIALS:

This study was conducted in 166 cases admitted at gynaec outpatient department who underwent NDVH for benign conditions at GOVT ISO AND KASTURBA GANDHI HOSPITAL, MADRAS MEDICAL COLLEGE-CHENNAI, for a period of 4 years from **jan 2013-dec 2016**.

Study approved by Hospital Ethical Committee.

### INCLUSION CRITERIA:

1. All symptomatic patients with uterine size upto 18 weeks
2. Symptomatic patients with fibroid uterus.
3. AUB with history of previous caesarian sections
4. AUB with pid
5. AUB with mild endometriosis/adenomyosis

### EXCLUSION CRITERIA:

1. Patients with third degree prolapse
2. Patients with malignant gynaecological conditions
3. Patients with associated large adnexal masses
4. Uterine size more than 18 weeks
5. Postmenopausal above 50yrs
6. Patients with severe endometriosis

### METHODS:

A total of 166 cases who were admitted to gynaec ward from outpatient department requiring hysterectomy for benign diseases with or without scarred uterus with uterine size upto 18 weeks in the absence of uterine prolapse or gross adnexal pathology were taken for study.

Preoperative investigations including routine urine investigations, complete blood counts, renal and liver function test, blood grouping, ECG, X-ray and ultrasonography of abdomen & pelvis to rule out malignancy and adnexal masses were done. Routine fractional curettage or hysteroscopic examination followed by D@C was done for all patients to rule out malignant pathology and to find out the exact pathology.

A proper written consent was taken from all patients after explaining procedures. Special consent was obtained for conversion to abdominal hysterectomy and for any inadvertent bladder or bowel injury.

1. Under anaesthesia either spinal or epidural and strict aseptic precautions the size of the uterus, adnexal mass, mobility, descent, cervical and vaginal accessibility reassessed and labial stitch taken on either sides

2. Bladder catheterised

3. Anterior lip of cervix held with single toothed Vulsellum and posterior lip with long alleys forceps for adequate traction

4. A curvilinear incision was made all around cervix and pubovesicocervical ligament was cut and bladder pushed up. In cases of previous scars by sharp dissection and LATERAL WINDOW TECHNIQUE bladder was pushed up and anterior fold of peritoneum visualised

5. Anterior fold of peritoneum was cut and bladder further pushed up with Divers speculum and pelvic peritoneum also opened

6. Uterosacral and cardinal ligaments along with lateral vaginal wall are clamped, cut and ligated.

7. Bilateral clamping cutting and ligating of uterine vessels on both sides done

8. Debulking done after the above step by **bisection, myomectomy or by decoring** methods or a combination of all these and uterus delivered out

9. After delivering the uterus in the vagina, hysterectomy completed by applying cornual clamps, cutting and ligating properly.

10. All pedicle checked meticulously for haemostasis and vault closed with perfect haemostasis.

11. Vaginal packing done, foley catheter applied and checked for clear urine. Stable vitals were confirmed and recorded

NDVH WAS CONSIDERED TO BE SUCCESSFUL IF THE PROCEDURE WAS NOT ABANDONED AND NOT CONVERTED TO ABDOMINAL HYSTERECTOMY.

OPERATIVE TIME CALCULATED FROM INCISION TO VAGINAL PACKING

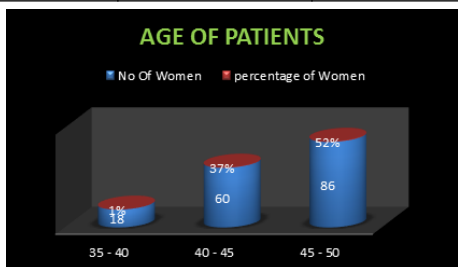
ESTIMATION OF BLOOD LOSS BY COMPARING PREOPERATIVE AND POSTOPERATIVE HAEMOGLOBIN

FOLEYS CATHETER REMOVED IN 24 HRS  
 ANTIBIOTICS GIVEN FOR 48 HRS  
 POST OPERATIVE COMPLICATIONS WERE RECORDED  
 PATIENT DISCHARGED IN FIVE TO SEVEN DAYS  
 ADVISED FOR REVIEW AFTER 2 WEEKS.

**RESULTS:**

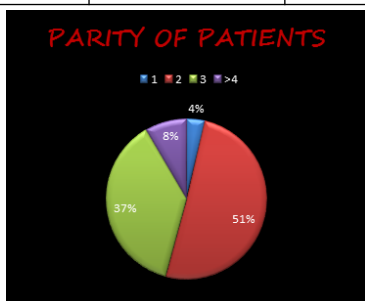
**Table - 1 AGE OF PATIENTS**

Age Of Patient	No Of Women	percentage of Women
35 - 40	18	1%
40 - 45	60	37%
45 - 50	86	52%



**Table - 2 PARITY OF PATIENTS**

Parity of Patients	No of Women N= 166	Percentage of Women
1	6	4%
2	84	51%
3	62	37%
>4	14	18%



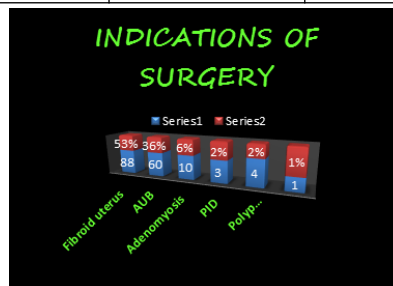
**Table - 3 SOCIO ECONOMIC STATUS**

Socio Economic Status	No of Women N = 166	Percentage of Women
I	6	3%
II	28	17%
III	36	22%
IV	40	24%
V	56	34%



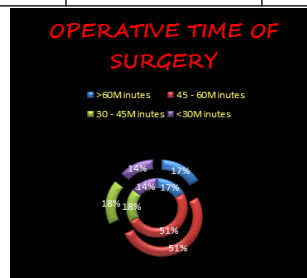
**Table - 4 INDICATIONS OF SURGERY**

Indications of Surgery	No of Women N = 166	Percentage of Women
Fibroid uterus	88	53%
AUB	60	36%
Adenomyosis	10	6%
PID	3	2%
Polyp (cervical & Endometrial)	4	2%
Endometriosis	1	1%



**Table - 5 OPERATIVE TIME OF SURGERY**

Operative Time of Surgery	No of Women N = 166	Percentage of Women
>60Minutes	28	17%
45 - 60Minutes	84	51%
30 - 45Minutes	30	18%
<30Minutes	24	14%



**Table - 6 POST OPERATIVE COMPLICATIONS**

Post Operative Complications	No of Women N = 166	Percentage of Women
Fever	10	6%
Vag Discharge	18	4%
Blood Transfusion	15	9%
Urine track Infections	10	6%

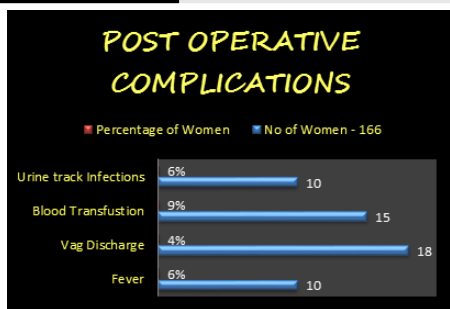


Table - 7 HOSPITAL STAY

Hospital Stay	No of Women N =166	Percentage of Women
Up to 5 days	24	14%
5 - 7 days	86	52%
7 - 10 days	46	28%
>10 days	10	6%

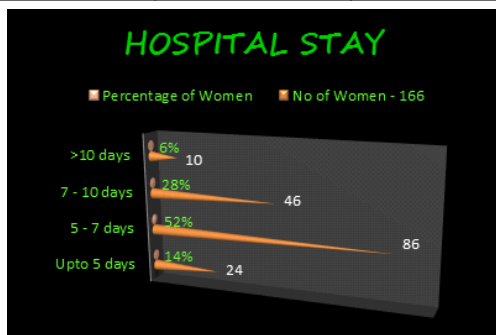


Table – 8 UTERUS DELIVERING TECHNIQUES

Uterus Delivering Techniques	No of Women N = 166	Percentage of Women
Bisection	66	40%
Myomectomy	50	30%
Coring out technique	33	20%
Combination of above technique	16	10%

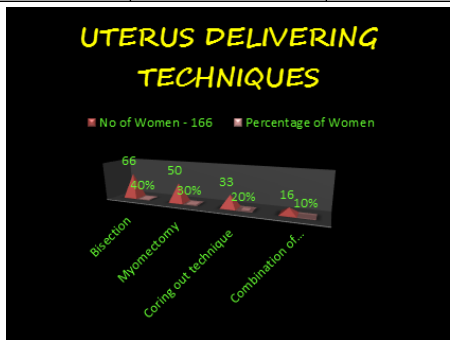
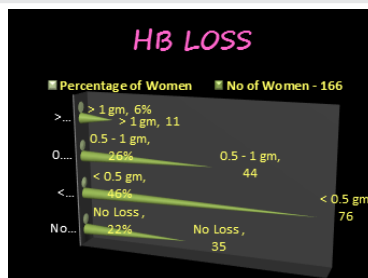


Table – 9 HB LOSS

HB Loss	No of Women N= 166	Percentage of Women
No Loss	35	22%
< 0.5 gm	76	46%
0.5 - 1 gm	44	26%
> 1 gm	11	6%



**DISCUSSION:**

This study was a **prospective study** conducted at GOVT ISO AND KASTURBA GANDHI HOSPITAL FOR WOMEN AND CHILDREN, MADRAS MEDICAL COLLEGE-CHENNAI for 4 years period from jan 2013-dec 2016 on 166 patients

When the age of the patients were considered, most of them belonged to 45-50 years group representing 52% of all patients. Patients above 50 years were not included in the study because of severe postmenopausal changes to cervix and anticipated difficulty in removing ovaries as well. When the parity was taken into account most of them were multiparous having more than 2 children contributing to 51 % and the procedure was easy to perform. Only six were nulliparous but the size of uterus was below 12 weeks and hence NDVH could be done for them. The study group was again divided into two groups:

**LOW RISK GROUP:**

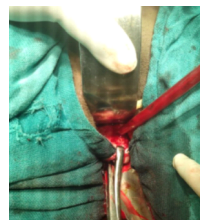
- 1.uterine sizes less than twelve weeks
- 2.uterus with good side to side and vertical mobility
- 3.multiparous lady with parity two and more

**HIGH RISK GROUP:**

- 1.uterine sizes from 12-18 weeks
- 2 AUB with scarred uterus with one,two ,three previous LSCS
- 3.Symptomatic mild endometriosis
- 4.Symptomatic mild to severe PID
- 5.AUB with cases with cervical polyp/endometrial polyp (planned for in situ hysterectomy)
- 6.inaccessible cervix and nulliparous women.

Of the 166 cases NDVH done for 108 cases of lower risk group, remaining 58 done for high risk groups. Among low risk group, commonest indication was fibroid uterus followed by abnormal uterine bleeding and adenomyosis, fibroid uterus with menorrhagia accounted for (56%). Shetlr et al reported the incidence of fibroid as 53% (2041/3800 hysterectomies).abnormal uterine bleeding was 44% and remaining 10% adenomyosis.

Among these high risk groups ,32 was done for uterine sizes from 12-18 weeks on unscarred uterus (two cases were 18 weeks) and no other risk factors. Only in one case there was was inadvertent bladder injury which was identified and repaired immediately vaginally. 18 cases were done for uterine sizes upto 14 weeks but scarred uterus. Of the patients with scarred uterus 13 were cases with one previous lscs, 4 were previous 2 lscs and one cases with three previous lscs but normal size uterus .The **LATERAL WINDOW TECHNIQUE** was meticulously carried out and using sharp dissection bladder was pushed up in all these cases of previous LSCS. Through this technique mild central adhesions were released after working from lateral aspect.



### FIG 1 .ANTERIOR PERITONEUM BEING OPENED IN PREVIOUS SCARRED UTERUS BY WORKING THROUGH LATERAL WINDOWTECHNIQUE.

Remaining eight high risk cases one was mild endometriosis,,one cases was with an endometrial adenomatous polyp , 3 endocervical polyp, and 2 cases with mild to moderate PID one case with severe PID . Case with severe PID had torrential bleed during clamping uterine stumps and was converted to abdominal route of hysterectomy.Two other cases with one with bladder adhesions and other with bleeding was converted to abdominal hysterectomy. One patient with adenomyomatous polyp had final hpe as endometriod carcinoma and hence we proceeded to post operative staging laparotomy to knock out the ovaries and complete staging.

The bisection only to deliver uterus was used in 40% of the patients with success. This was also performed as initial procedure and myomectomy or morcellation was added later on. Myomectomy alone was used in 30% @ decoring out in 20% cases

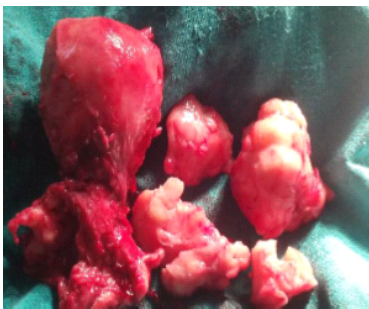


FIG 2 DEBULKING TECHNIQUE BY BISECTION AND MOMECTOMY



FIG 3 DEBULKING OF UTERUS BY BISECTION ONLY

The blood loss ( $p < 0.001$ ) and the operative time ( $p < 0.001$ ) were found to be directly proportional to the size of the uterus. The relationship is easy to understand since bigger uteri require more debulking procedures leading to more operating time and increased blood loss.

Considering the blood loss during surgery, we estimated by checking preoperative haemoglobin with postoperative haemoglobin done after 24 hours. No change in haemoglobin in 35 patients (22%), haemoglobin difference less than 0.5gm% in 76(46%) patients and haemoglobin difference between 0.5-1.0gm% in 44 (26%)patients and more than 1.0gm% difference in 11(6%) patients only. Post operative complications were very less .Vaginal discharge in only 8 patients

treated with higher antibiotics, 10 had fever treated according to culture and these were cases with already pelvic inflammatory disease. 15 cases had blood transfusion after surgery and most of these had continous bleeding for many months before surgery. All patients were screened for risk of thrombosis and thromboprophylaxis was initiated according to BMI and other risk factors.A thin built patient had DVT after 10 days of surgery having travelled more than 4 hrs travel after discharge and was readmitted and treated with intravenous titred heparin.

Hospital stay was less than 5 days in 14% ,5-7 days in 52%, 7-10 days 28% and more than 10 days in 6% and upto 10 days in 10 patients. Average hospital stay was  $5.1 \pm 1$  days. The stay was shorter than the average stay of 7-8 days for abdominal hysterectomy in our hospital.

### CONCLUSION:

1. This study confirms the utility and safety of vaginal hysterectomy for the moderately enlarged uterus upto 12 weeks and beyond upto 18 weeks. This is confirmed by the less operating time, less blood loss, less operative and post operative complications of NDVH.

2. An expert vaginal surgeon can defy the usually accepted contraindications of vaginal hysterectomy like uterus > 12weeks size, cervix flushed with vagina, previous pelvic surgery, and narrow subpubic angle.

3. The usual ratio of vaginal hysterectomy to abdominal hysterectomy is 1:3; ideally the ratio was reversed in our institution and nondescent vaginal hysterectomies increased to 75% of all hysterectomies compared to 25% before our study.

### REFERENCES:

- Chandana C, Venkatesh S, Shah TN. Non-descent vaginal hysterectomy for benign gynaecological disease - a prospective study. *J Evidence Based Med Healthcare.* 2014;1(8):827-33.
- ACOG Educational Bulletin. Operative laparoscopy. Number 239, August 1997. American College of Obstetricians and Gynecologists. *Int J Gynaecol Obstet.* 1997 Dec;59(3):265-8.
- Patel R, Chakravarty N. Comparative study of laparoscopic hysterectomy versus vaginal hysterectomy. *Int J Med Sci Public Health.* 2014;3:335-7.
- Virmani S. Surgical trends in hysterectomy - a comparative analysis. *Indian J Appl Res.* 2014;12(4):261-3.
- Otah KS, Khalil M. Changing the route of hysterectomy:The results of a policy of attempting the vaginal approach in all cases of Dysfunctional Uterine Bleeding. *Eur J Obstet Gynecol Reprod Biol* 2006; 125:243-7.
- Goel N, Rajaram S, Ghumman S. Step by step non-descent vaginal hysterectomy. (Chapter 12 - Analysis of Data:75 Consecutive Cases). Delhi, Jaypee, 2005:138-46.
- Davies A, Wizza E, Bournas N et al. How to increase the proportion of hysterectomies performed vaginally. *Am J Obstet Gynecol* 1998; 179:1008-12.
- Nalini N, Bijeta, Singh S, Singh HV. Clampless non descent vaginal hysterectomy: "A novel art". *Int J Reprod Contracept Obstet Gynecol* 2015;4:725-9