

## A comparative study of vaginal and abdominal hysterectomy for enlarged uterus

Pratibha Prakash<sup>1\*</sup>, Tabassum Ahmed<sup>2</sup><sup>1</sup>Assistant Professor, Obs & Gynae Department, NMCH, Patna, Bihar, India<sup>2</sup>Associate Professor, Obs & Gynae Department, NMCH, Patna, Bihar, India

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**Abstract**

**Objective:** To compare outcome in patients who underwent vaginal and abdominal hysterectomy for benign enlarged uterus. **Methods:** In a prospective randomized study, 50 vaginal hysterectomies were compared with 50 abdominal hysterectomies performed from April 2020 to September 2021. Patients characteristics before, during and after operations were reviewed and followed up for 3 months to evaluate post op complications. **Results:** There was no difference in patients age, parity, uterine size and intraoperative complications between two groups. Operative time, blood loss, post op demand for analgesia and duration of hospital stay was lower in vaginal hysterectomy group as compared to the abdominal hysterectomy group. The overall complication occurred with TAH was significantly more than vaginal hysterectomy. **Conclusion:** Vaginal hysterectomy is safe as compared to abdominal hysterectomy in the treatment of benign gynecological disease with greater efficacy and safety even for enlarged and non prolapsed uterus.

**Keyword:** Abdominal hysterectomy, Laparotomy, Vaginal hysterectomy

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**Introduction**

Hysterectomy is one of the most commonly performed surgeries in gynecology worldwide. There is no clearcut consensus as to which of the route abdominal, vaginal or LAVH, TLH would be most appropriate for given indication.

The debate whether the uterus should be removed vaginally or abdominally arose when langenback first performed VH in 1813. The most common indication for hysterectomy are symptomatic uterine leiomyoma, AUB, endometriosis, adenomyosis and uterine prolapse. Vagina is the natural route to access uterus with good anesthesia, adequate light and exposure. Vaginal route offers cosmetic benefit as it leaves no visible scar. An enlarged uterus is not a contraindication for vaginal hysterectomy. To facilitate the successful completion of vaginal hysterectomy volume reduction techniques can be employed. They include bisection, myomectomy and wedge resection which enables the surgeon to debulk the uterus.

ACOG guidelines suggest vaginal hysterectomy as most appropriate in patients with mobile uterus not larger than 12 weeks of gestational size. The selection of the route of hysterectomy is mainly influenced by the factors like size and shape of uterus, vaginal accessibility of the uterus, extent of extrauterine disease and expertise of the surgeon. The present study was to compare TAH and NDVH/VH with respect to duration of surgery, intra and post operative complication, hospital stay in women and to determine the outcomes of both procedures with benign disorders.

**Materials and methods**

The prospective study was conducted in NMCH, Department of Obstetrics & Gynecology, Patna over the period of one and half year from April 2020 to September 2021. A total of 50 patients requiring hysterectomy were selected after detailed history including patient's age, parity, weight, menstrual history, presenting complaints, general examination, systemic and pelvic examination and cytological examination. 25 patients were selected for abdominal hysterectomy and 25 patients for vaginal hysterectomy.

\*Correspondence

**Dr. Pratibha Prakash**

Assistant Professor, Obs & Gynae Department, NMCH, Patna, Bihar, India

Inclusion criteria were benign uterine disease, uterus less than 12 weeks size, mobile and patients who gave their informed consent to participate. Exclusion criteria were malignancy, uterine size more than 12 weeks, endometriosis, and pelvic adhesions. The anesthesia was spinal or general or as necessary for both the groups. Both abdominal and vaginal hysterectomies were performed by consultants experienced in both AH & VH procedure. Parameters that were evaluated were patient's age, weight, parity, operative time, intra-operative complications, operative blood loss, need for analgesics, post operative complications and length of hospital stay.

**Table-I General characteristics of the patients**

	VH	AH
Age (Yrs)	35-50	35-55
Parity (Average)	2.8	2.5

**Table-II Surgical findings & post operative course of the two groups of patients encountered**

Operative time in mins		VH	AH
	Range	45-65 mins	60-80 mins
	Mean $\pm$ SD	50.51 $\pm$ 10.9	65.44 $\pm$ 11.12
Blood Loss (ml)	Range	140-250 ml	150-450 ml
	Mean	191 ml	287 ml

**Post Operative course of the two groups of patients**

Post Operative complications	VH	AH
Fever $>$ 38 $^{\circ}$ C	1	2
BT	1	1
Wound Infection	0	2
Bladder injury	0	1
Bowel injury	0	0
Hospital Stay	VH	AH
Mean $\pm$ SD	5.0 $\pm$ 1.1	7.5 $\pm$ 1.17

**Result**

A total 50 patients were included in the study. 25 underwent AH & 25 cases underwent VH. Mean age of those operated patients was 48.7

years. Parity was also comparable in both AH and VH groups. We observed significant difference in the duration of surgery between the two groups, where the range time to perform TAH was 65.44±11.12 mins and VH was 50.51±10.9 mins. The mean blood loss in TAH was 287ml and in VH was 191 ml which was significantly less in NDVH. Overall complications with TAH were significantly more than in VH group. The difference in the duration of hospital stay was significantly less with VH than TAH. Mean number of doses of analgesics given was significantly less in VH group than AH group.

#### Discussion

Hysterectomy is the most commonly performed gynecological surgery. For several decades, the abdominal approach has been the most common route of Hysterectomy. Nowadays, the techniques like bisection myomectomy, wedge resection, slicing method, and use of ligature vessel sealing system used either individually or in combination has made per vaginal removal of uterus feasible and safe.

The present study attempted to compare the intra-operative and post-operative outcome in patient undergoing VH & AH for benign conditions.

In the present study both the study and control groups had similar uterine enlargement. The present study showed that when VH was performed for enlarged uterus, there was significant decrease in blood loss, operative time, analgesic use, and hospital stay without increase in intra-operative & post-operative complication when compared with abdominal route. These results are comparable to other similar studies. Benassi et al 2002 compared the outcomes of the two methods of hysterectomy and found that complications were not significantly different except for post-operative fever with AH. Rohidas and Chavhan et al and other studies have showed similar results where VH was performed in lesser time.

Blood loss in VH is less than AH that is reported in study done by Hofman, Balakrishnan D et al and Abrol S et al. In addition Mistrongelo et al, reported that VH was safe and effective in cases of large uterus. Gurend et al found that VH could be performed with less morbidity, even in patients with large, immobile uterus and previous pelvic surgery.

In present study intraoperative complication rate was less in VH as compared to AH. Almost similar rates of complication was observed in Debohinance study (2001). In Doucette et al study 2001 the intraoperative complication rate was 3.2% for VH and 6.5% for AH.

In this study no intraoperative complications occurred in patients of VH group and no vaginal approach was converted to an abdominal

approach. Nowadays there is a change in trend from AH towards VH. All these studies indicate that VH is safe and effective surgical technique for benign gynecological diseases.

Proper patient selection and experience of surgeon are probably the keys to successful VH in enlarged uterus.

#### Conclusion

Vaginal route is a safe, feasible and patient-friendly method of performing Hysterectomy. VH appears to have advantages over AH in the treatment of benign gynecological disease, providing greater efficacy and safety with minimal invasiveness. The amount of blood loss (reduces need for BT), intra-operative complications, post-operative complications & post-operative hospital stay are relatively less with VH.

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