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A PROSPECTIVE STUDY ON SAFETY AND OUTCOME OF NON-DESCENT VAGINAL HYSTERECTOMY (NDVH) FOR BENIGN UTERINE DISORDERS

Obstetrics & Gynaecology

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ABSTRACT

Background: Non-descent vaginal hysterectomy (NDVH) is increasingly recognized for its advantages over traditional abdominal approaches in operating and treating benign uterine disorders. This study evaluates the safety and outcomes of NDVH, particularly focusing on intraoperative blood loss, operative time, post-operative hospital stays, and complications. **Aims and Objectives:** To assess the safety and efficacy of NDVH in patients with benign uterine disorders and to evaluate intraoperative blood loss, duration of surgery, length of hospital stay, and the incidence of intraoperative and postoperative complications. **Methods:** The prospective observational study included 25 patients with non-descent and minimal desent uterus with benign pathology, adequate mobility, size upto 16 weeks and advised hysterectomy at BKL Walawalkar Rural Hospital and Civil hospital Ratnagiri from June to December 2024. Baseline demographic data like were collected like patient's age, parity, socioeconomic status, marital status, present history, and past history. Per speculum examination and per vaginal examination were done to look size of the uterus, mobility of the uterus, assessment of the space available around the uterus, descent of the uterus, and the presence of adnexal pathology. Investigation was done by pelvic ultrasonography. Malignancy was ruled out by dilatation and curettage. Intraoperative complications were noted if any. **Results:** The mean age of participants was 46.20 years, with 59% aged between 45-50 years. Most patients (73%) underwent complete removal of the uterus, while others required bisection or myomectomy. The average uterine size was approximately 10-12 weeks, with 39% diagnosed with abnormal uterine bleeding (AUB-L). The mean blood loss during surgery was 220.40 ml, with a mean operative time of 70.17 minutes. Post-operative complications were noted in 5 patients (14%), including spinal headaches in 1 cases and urinary tract infections in 2 cases. The average hospital stay was 4 days, indicating a favorable recovery profile compared to traditional methods. Statistical analysis revealed that intraoperative complications occurred in 4 patient, primarily bladder injuries and hemorrhage. **Conclusions:** The study concludes that NDVH is an effective surgical technique for managing benign uterine disorders, with minimal intraoperative complications and a short average hospital stay. The findings support the increasing adoption of NDVH as a preferred method for hysterectomy in appropriate cases.

KEYWORDS

Non-Descent Vaginal Hysterectomy, Benign Uterine Disorders, Intraoperative Complications, Postoperative Recovery, Surgical Outcomes.

INTRODUCTION

Hysterectomy is one of the most commonly performed gynecologic and obstetric surgeries worldwide, ranking second only to cesarean delivery[1].1 It is a highly safe procedure, with an average rate of visceral injury between 0.5% and 2% and a mortality rate ranging from 0.5 to 2 per 1,000 cases[2]. Minimally invasive approaches to hysterectomy include techniques such as non-descent vaginal hysterectomy (NDVH), laparoscopically assisted vaginal hysterectomy (LAVH), and total laparoscopic hysterectomy. Most hysterectomies are carried out for non-malignant conditions[3]. Whenever feasible, the vaginal route is recommended due to its lower morbidity, shorter hospital stay, and higher patient satisfaction. The primary indication for vaginal hysterectomy is uterovaginal prolapse, while conditions such as a significantly enlarged uterus or menstrual abnormalities are typically addressed through the abdominal route[4].

Laparoscopically assisted vaginal hysterectomy has been widely adopted and refined. Advanced techniques, including the posterior-anterior approach and lateral entry, have made NDVH feasible even in patients with dense adhesions or a history of prior pelvic surgeries. Studies such as the Collaborative Review of Sterilization study[5] along with research by Ottosen et al[6] and Taylor et al[7] have demonstrated that vaginal hysterectomy is a viable alternative to abdominal hysterectomy, offering fewer complications, quicker recovery, and reduced hospital stays. Additionally, evidence indicates that vaginal hysterectomy can be successfully performed in cases of uterine enlargement, nulliparity, or prior pelvic surgeries, and the need for oophorectomy should not preclude this approach[8]. Gynecologists should recognize the advantages of the vaginal route, use clinical evaluation, ultrasonography, and examination under anesthesia to strengthen their decision-making, and progressively attempt NDVH with increasing uterine size to optimize patient outcomes. With this background we conducted a study, to assess intraoperative blood loss, the operative time, and post-operative hospital stay along with the intraoperative and post-operative complications during NDVH and their management.

MATERIALS AND METHODS

The present prospective observational study was conducted at Department of OBGY at BKL Walawalkar Rural Hospital, Dervan, Ratnagiri And Civil Hospital Ratnagiri between June to December 2024 (6 months). 25 patients with non-descent uterus with benign pathology, adequate mobility, size upto 16 weeks and advised hysterectomy were included in the study. Informed consent was taken from patients before participating in the study. Special consent for conversion to abdominal hysterectomy if needed and chances of bladder and bowel injury was taken. Patients, diagnosed with Endometriosis, uterine prolapse, immobility of uterus, genital malignancy, size of uterus >18 weeks, and ovarian tumors were excluded from the study.

The study was started after getting approval from Institutional Ethics Committee. Baseline demographic data like were collected like patient's age, parity, socioeconomic status, marital status, present history, and past history. Later patients underwent gynaecological examination. Per speculum examination and per vaginal examination were done to look size of the uterus, mobility of the uterus, assessment of the space available around the uterus, descent of the uterus, and the presence of adnexal pathology. Investigation was done by pelvic ultrasonography to rule out gross adnexal pathology, for the assessment of uterine size and if any fibroid. Malignancy was ruled out by dilatation and curettage. Patient was prepared for hysterectomy and surgery was done under all aseptic precautions. After the delivery of uterus, haemostasis was achieved and confirmed. Intraoperative complications were noted if any.

Operative time was calculated from the beginning of the incision at the cervicovaginal junction to the closure of the vaginal vault. Blood loss was calculated by noting the number of mops used during the procedure and the amount of blood sucked in the suction bottle. On an average, one fully soaked mop corresponds to 80 ml of blood. Post-operative catheterization with Foley's catheter was done in all patients, which was removed in most of the cases on post-operative day 1. Post-

operative complications such as fever, UTI, vaginal discharge, vaginal bleeding, diarrhoea, and pain were noted. Pain in post-operative period was considered as morbidity when it did not subside with regular dosage of analgesics. Post-operative hospital stay was calculated from the day of operation to the day of discharge.

Patients related data was collected and entered in Microsoft Excel. The data was analysed using SPSS version 26. The qualitative data was expressed in terms of percentages and compared by chi square or fisher's exact test. The quantitate data was expressed as mean and standard deviation. All the analysis was 2 tailed and the p value less than was 0.05 considered significant.

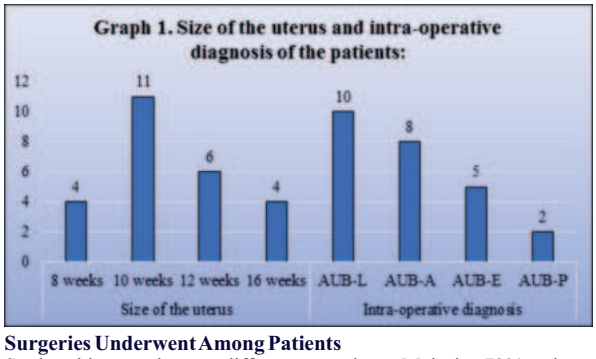
RESULTS

In the present study, out of 25 patients who underwent non-descent vaginal hysterectomy (NDVH), majority, 59% were from age group 45 to 50 years followed by 22% from 41 to 44 years. The mean age of the study subjects was 46.20±5.82 years ranging from 40 to 63 years. About 29% patients had parity one, 44% had parity of two, 27% had parity 3 or more.

Table 1. Age and Parity Distribution of the Patients:

Age and Sex Distribution		Frequency	Percent
Age Groups	< 40 years	1	6%
	41 to 44 years	6	59%
	45 to 50 years	14	22%
	> 50 years	4	13%
Parity	One	7	29%
	Two	12	44%
	3 or more	6	27%
Total		25	100%

Size of the uterus shows that 12% were 8 weeks, 45% were 10 weeks, 24% were 12 weeks and 19% were 16 weeks in the present study. Distribution of the study subjects based on diagnosis shows that 39% patients were AUB-L, 31% were AUB-A, 22% were AUB-E and 8% were AUB-P.



Surgeries Underwent Among Patients

Study subjects underwent different procedures. Majority, 73% patients underwent complete removal of the uterus. Bisection was done in 18% patients, 5% patients needed bisection along-with myomectomy, 2 patients underwent myomectomy. Hydro-dissection was conducted in 93% of the patients underwent. The mean blood loss was 220.40±37.20 ml ranging between 100ml to 450ml. Only 2 patients were converted to TAH. The mean duration of surgery was 70.17±18.82 minutes. The mean duration of the hospital stay was 4 ±2 days with range of 4 to 8 days.

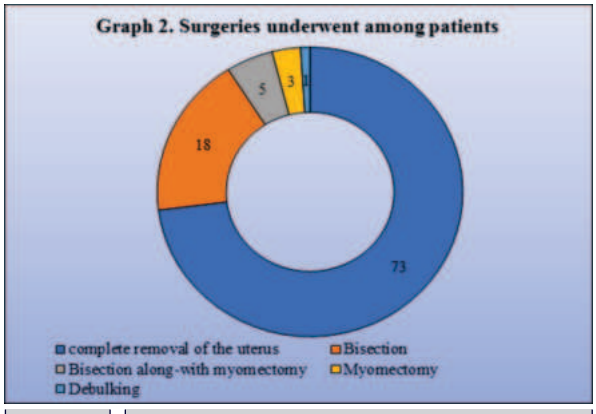


Table 2. Mean Blood Loss, Mean Duration of Surgery and Mean Duration of Hospital Stay:

Parameters	Mean± Std. Deviation	Range
Blood loss	220.40±37.20 ml	100ml to 450ml
Duration of surgery	70.17±18.82 minutes	45 to 120 minutes
Duration of hospital stay	4±2 days	4 to 8 days

Intra-operative complications were seen in 5 patients and 20 patients didn't have any. 1 patients had bladder injury, 2 patients had haemorrhage and Conversion to TAH was needed in 2 patients only. Post-operative complications were seen in 5 patients and remaining patients didn't have any. 1 cases developed spinal headache, 2 had UTI, 1 had Vaginal discharge, 1 developed fever and rest did not have any post operative complications.

About 45% had pain score of <3, 51% had pain score of 3 to 5 and 4% had pain more than 5 in the present study.

Table 3. Intra- and Post-operative Complications and Pain Scores of the Patients:

Intra- and post-operative complications		Frequency	Percent
Intra-operative complications	bladder injury	1	4%
	haemorrhage	2	8%
	Conversion to TAH	2	8%
	No Complications	20	80%
Post-operative complications	spinal headache	1	4%
	UTI	2	8%
	Vaginal discharge	1	4%
	fever	1	4%
	No Complications	20	80%
Pain score (VAS)	<3	10	45%
	3 to 5	12	51%
	> 5	3	4%
Total		25	100%

DISCUSSION

Non descent vaginal hysterectomy had advantages over the abdominal hysterectomy and laparoscopic hysterectomy[9]. So, we conducted a study to evaluate the non-descent vaginal hysterectomy cases in our setup. In the present study, the mean age of the study subjects was 46.20±5.82 years ranging from 40 to 63 years. About 29% patients had parity one, 44% had parity of two, 27% had parity 3 or more.

Study subjects underwent different procedures. Majority, 73% patients underwent complete removal of the uterus. Bisection was done in 18% patients, 5% patients needed bisection along-with myomectomy, 2 patients underwent myomectomy. Hydro-dissection was conducted in 93% of the patients underwent. Shanti S et al[10] reported that among 25 cases, 11 cases had bisection, one case had Myomectomy, five cases had coring and four cases had coring and Myomectomy in their study. Mishra N et al[11] reported that about 53.84% underwent bisection with Myomectomy, 17.94% bisection only, 16.66% had bisection with morcellation and 11.53% had removal of intact uterus. Ramesh Kumar R et al[12] inferred that combination of the debulking techniques was used in 90% of the cases with myomectomy being the most common single debulking technique used in 61.5% of the cases followed by coring in 36.9% of the cases.

Intra-operative complications were seen in 5 patients and 80% patients didn't have any. 1 patients had bladder injury, 2% patients had haemorrhage and Conversion to TAH was needed in 2 patients only. Saha R et al[13] reported that among 50 cases studied, 3 cases had difficulty in opening the pouch of douglas and four cases had difficulty in reaching myoma. Zahan A et al[14] reported that about 42% had difficulties during the procedure. Hiran Chaminda SH et al[15] reported that one case each had fever and RV fistula; three cases had spinal headache and vault discharge and rest did not have any post operative complications.

Post-operative complications were seen in 5 patients and 80% patients didn't have any. 1 case developed spinal headache, 2 had UTI, 1 had Vaginal discharge, 1 developed fever . Saha R et al[13] reported that about ten cases had post operative pain, two cases had fever and seven cases had haemorrhage requiring transfusion. Gayatri SB et al[16] reported that there was bladder injury in a patient with 2 previous LSCS and rectal injury due to large fibroid with difficult extraction post operatively with faecal fistula possibly due to unwanted pressure

on the rectum by the speculum. Failure of NDVH was due to inaccessible fundal fibroid in two cases. Mishra N et al[11] reported that about 2.56% had conversion to TAH, 1.2% had primary haemorrhage, 1.28% vault haematoma, 10.25% had pyrexia, 5.12% urinary tract infection and 1.28% had urinary tract fistula.

Post-operative complications were seen in 5 patients and 80% patients didn't have any. 1 cases developed spinal headache, 2 had UTI, 1 had Vaginal discharge, 1 developed fever. Ramesh Kumar R et al[12] reported that only 5 cases had post-operative complications. Blood transfusion was required in 2 cases and 3 cases had postoperative fever.

The mean duration of the hospital stay was 4±2 days with range of 4 to 8 days. Studies conducted by Shanti S et al[10] (4-5 days) and Dewan R et al[17] (3 days) had concordant inferences with our study. The mean duration of surgery was 70.17±18.82 minutes. Studies by Shanti S et al[10] (60 minutes), Dewan R et al[17] (54.5minutes) and Murali MS et al[18] (40minutes) reported varied operating times. Our study when compared to other study had faster operating time on an average basis.

Limitations

Type of study being cross-sectional study is main limitation of the study and it has covered single tertiary care center only. Multi-center randomised controlled trials comparing NVDH with other techniques will give better picture of the safety and ease of the technique.

CONLCUSION

We concluded that the most common indication was AUB-L, with the average uterine size corresponding to 10 weeks. Intraoperative complications were rare, with the most frequent being bladder injury and hemorrhage. Postoperatively, one patient developed a fever, and one experienced spinal headaches. The average hospital stay was 4 days, and the mean duration of surgery was approximately 70 minutes. Given the indications, NVDH stands out as one of the most effective hysterectomy techniques, offering fewer complications and quicker recovery.

REFERENCES

1. Wilcox L, Koonin L, Pokras R, Strauss L, Xia Z and Peterson H. Hysterectomy in the United States, 1988-90. Obstet Gynecol. 1994;83:549-555.
2. Manyonda I. Hysterectomy for benign gynaecological disease. Curr Obstet Gynaecol. 2003;13(3):159-165.
3. Mittal P, Andiliya A, Bansiwal R, Jyotsna S and Sunita S. Enlarged uterus through a natural orifice: Worth an effort? A randomized controlled trial. Int J Reprod Contracept Obstet Gynecol. 2014;3(4):1076-1081.
4. Chandana C, Shreedhar V and Shah T. Non-descent vaginal hysterectomy for benign gynecological disease-a prospective study. J Evid Based Med Healthc. 2014;1(8):827-833.
5. Pradeep S, Beeresh C, Krishna L, Vimala K, Shailaja N, Pallavi P et al. Non-descent vaginal hysterectomy: Analysis of 120 cases. J Evid Based Med Healthc. 2015;2(32):4729-4735.
6. Ottosen C, Lingman G and Ottosen L. Three methods for hysterectomy: A randomised, prospective study of short-term outcome. BJOG. 2001;107(11):1380-1385.
7. Taylor S, Romero A, Kammerer-Doak D, Qualls C and Rogers R. Abdominal Hysterectomy for enlarged myomatous uterus compared with vaginal hysterectomy with morcellation. Am J Obstet Gynecol. 2003;189(6):1579-1582.
8. Begum S, Akhtar R, Barua S and Ferdous J. A cross-sectional descriptive study on non-descent vaginal hysterectomy. Chittagram Maa-O-Shishu Hosp Med Coll J. 2014;13(1):1-4.
9. Panda S, Behera AK, Jayalakshmi M, Narasinga Rao T, Indira G. Choosing the Route of Hysterectomy. J Obstet Gynaecol India [Internet]. 2015 Jul;65(4):251–4.
10. Shanthi S, Rani SU, Arumaikannu J. Feasibility of nondescent vaginal hysterectomy (NDVH) in women with scarred uterus-our experience. Int J Clin Obstet Gynaecol. 2017;1(2):76–9.
11. Mishra N, Panigrahy S, Singh I. Study of safety and feasibility of non-descent vaginal hysterectomy in modern gynaecology practice. J Evid Based Med Healthc. 2017;4(50):3062–5.
12. Rameshkumar R, Naik SN. Non-descent vaginal hysterectomy for large uterus-safety and feasibility. Int J Reprod Contracept Obs Gynecol. 2018;7(9):3563–7.
13. Saha R, Ns S, Thapa M, Shrestha J, Bajracharya J, Sm P. Non-descent Vaginal Hysterectomy: Safety and Feasibility. NJOG. 2012;7(2):14–6.
14. Zahan AA, Shahnewaz KH, Khan F, Salma U. Non Descent Vaginal Hysterectomy : A Rational Surgical Approach. Bangladesh J Obs Gynaecol. 2015;30(1):15–9.
15. Hiran Chaminda S, Ekanayake C, Sriskanthan R, Perera B, Palihawadana T. Outcome of Non-Descent Vaginal Hysterectomy at a Single Centre in Sri Lanka : an Observational Study. Sri Lanka J Obstet Gynaecol. 2015;42–6.
16. Gayathri K, Sajana G, Manjusha P, Prk B. Non Descent Vaginal Hysterectomy (NDVH) for Benign Gynaecological disease : An Institutional Study on safety and feasibility from South India Abstract : IOSR J Dent Med Sci. 2017;16(11):59–63.
17. Rupali D, Shivani A, Bharti M, K SS. Non-Descent Vaginal Hysterectomy - An Experience. J Obs Gynecol. 2004;54(4):376–8.
18. Murali MS, Khan A. A Comparative Study of Non - descent Vaginal Hysterectomy and Laparoscopic Hysterectomy. J Obstet Gynecol India. 2019;69(4):369–73.