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Original Research Article

Our experience on non-descent vaginal hysterectomy: a forgotten skill

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ABSTRACT

Background: Hysterectomy is the most commonly performed major gynecological procedure. It can be done by different routes like abdominal or vaginal or laparoscopic route. Vaginal route of hysterectomy is undoubtedly less popular these days due to inclination towards laparoscopic route by both surgeon as well as patients. Keeping this is mind we have planned this paper to share our experience of Non Descent Vaginal Hysterectomy at a tertiary level hospital.
Methods: A retrospective study was conducted at the department of obstetrics and gynecology of Vardhmann Mahavir Medical College & Safdarjung hospital, New Delhi over the period of one year. All the patients undergoing non -descent vaginal hysterectomy for benign indication with adequate vaginal access, without suspected adnexal pathology, who did not have any uterine descent were included in the study. In bigger size uterus morcellation techniques like bisection, debulking, myomectomy, slicing was used to remove the uterus. Intraoperative findings and post-operative complications were recorded. Statistical analysis was done.
Results: During the study period total 138 hysterectomies were performed. Most of the women were in the age group of 46 to 50 years (50%). All patients were parous. In 56% patients, uterine size was 8-10 weeks. Fibroid uterus (37%) followed by adenomyosis (27%) was the commonest indication for hysterectomy. The most common complication was febrile morbidity (n=13) followed by urinary tract infection (n=9).
Conclusions: Non descent vaginal hysterectomy procedure in hand of a skilled surgeon can be done upto 14 weeks uterine size.

Keywords: Non descent vaginal hysterectomy, Fibroid uterus, Menorrhagia, Abdominal Hysterectomy, Laparoscopic Hysterectomy.

INTRODUCTION

Lower segment caesarean section (LSCS) which is a commonly performed procedure in obstetrics, Hysterectomy is another most common procedure next to LSCS. Hysterectomy can be done through various routes like Abdominal, Vaginal, Laparoscopic or Robotic. The choice of route through which hysterectomy can be performed depend upon the number of factors such as nature of disease (benign or malignant), size and shape of uterus, vaginal accessibility, presence of extra uterine disease or any adnexal mass, need of concurrent procedure, patient preference or affordability and surgeon's expertise skills.[1]

Most of the times, hysterectomies are performed abdominally either by laprotomy or laproscopically. Hysterectomy by laprotomy is a major surgery with more chances of having paralytic ileus, stitch line infections, incisional hernia etc. Laparoscopic hysterectomy may be an alternate option to these complications with less chances of stitch line infection and incisional hernia but it requires skilled surgeons, trained staff, costly equipment's and cost as well as duration of procedure is more. Robotic

surgeries are having similar problems.[2] So in present time, where minimal invasive surgeries are gaining popularity, vaginal route of hysterectomy should not be over looked.[3,4] Main causes for decreased utilization of vaginal route for non-prolapsed uteruses may include switching of resident training in surgical techniques due to the developments of laparoscopic skills and devices, changes of surgical skills in practice, and huge propaganda as well as effects due to propaganda of laparoscopic device companies.[5] This leads us to do this study on Non descent vaginal hysterectomy (NDVH) making our aim to know about the feasibility and complications of NDVH in uterus up to 14 weeks size.

METHODS

It was a retrospective study conducted at the department of obstetrics and gynaecology of Vardhmann Mahavir Medical College & Safdarjung hospital, New Delhi over the period of one year. (Oct 2014 – sept 2015) All the patients undergoing non -descent vaginal hysterectomy for benign indication with adequate vaginal access, with good mobility, without suspected adnexal pathology and who did not have any uterine descent were included in the study. In bigger size uterus morcellation techniques like bisection, debulking, myomectomy, slicing was used to remove the uterus.

All the patients with uterine size more than 16 weeks, with adnexal masses, with prolapsed uterus, with restricted mobility of uterus and suspicion of genital malignancy were excluded from the study. Pre-operative investigations including complete blood count, urine examination, blood grouping, fasting and post prandial blood sugar, serum creatinine, blood urea, endometrial biopsy, ECG, chest X-ray, USG pelvis was done in all patients before surgery. Informed written consent was taken after explaining the procedure, complications and specific consent for conversion to abdominal hysterectomy if needed. Pre-operative findings like demographic details, indication of hysterectomy, uterine size as well as Intra-operative findings like operating time, blood loss, debulking procedure and post-operative complications or hospital stay were recorded. Post-operative period of all patients were observed for any complications. All the injectables including antibiotics or painkillers were stopped on second day. Any prolongation of injectable antibiotics or injectable painkillers for more than one day was recorded. Statistical analysis was done by using appropriate statistical methods like frequency distribution tables. Only descriptive analysis was done.

RESULTS

Total 138 patients were recruited after fulfilling the inclusion criteria. Demographic details including age, parity, religion, education and co morbidities of those patients are tabulated in table 1. Most of the patients (50%) were belonging to age group 46-50 years followed by 41-45 years age group (33%) and 51-55years (29%). The mean age in our study is 49.66 ± 3.76 years. (Mean ± SD)

In our study, 90% females were multiparous. Hypothyroidism (23; 16.67%) was the most common co – morbidity associated followed by diabetes (15; 10.87%) and hypertension (12; 8.69%).

Table 1: Demographic details.

Age (in years)	Number (%)
35-40	2 (1.44)
41-45	33 (23.91)
46-50	70 (50.72)
51-55	29 (21.01)
>55	4 (2.89)
Parity	
Primiparous	13 (9.42)
Multiparous	125 (90.58)
Religion	
Hindu	105 (76.09)
Muslim	32 (23.19)
Christian	1 (0.72)
Education	
Illterate	85 (61.59)
Primary/ secondary	42 (30.43)
Graduate	11 (7.97)
Co-morbidities	
Hypertension (HT)	12 (8.69)
Diabetes (DM)	15 (10.87)
HT+DM	8 (5.79)
Asthma	3 (2.17)
Hypothyroidism	23 (16.67)
Anemia	12 (8.69)

Table 2: Surgical Procedure.

Indications	Number (%)
Abnormal uterine bleeding	29 (21.01)
Fibroid uterus	51 (36.96)
Adenomyosis	38 (27.54)
Polyp	12 (8.69)
Endometrial hyperplasia	8 (5.79)
Uterine size (in weeks)	
<6	7 (5.07)
6-8	21 (15.23)
8-10	78 (56.52)
10-12	28 (20.29)
12-14	4 (2.89)
Debulking procedure	
Bisection	13 (9.42)
Myomectomy	8 (5.79)
Morcellation	9 (6.52)
Combination technique	2 (1.45)

Table 2 shows the various parameters related to surgical procedure like indications of hysterectomy, uterine size on examination in weeks, and any debulking procedure used in delivery of the big size uterus. The conversion of vaginal procedure to abdominal procedure due to any reason was

zero in our study that means all the cases were operated through vaginal route only.

Table 3: Quality Indicators indicating feasibility.

Operating time (in min)	Number (%)
30-60	54 (39.13)
60-90	84 (60.87)
Blood loss (in ml)	
Upto 100	41 (29.71)
100-300	87 (63.04)
>300	10 (7.25)
Hospital stay (in days)	
≤ 3	101 (73.19)
4-5	30 (21.74)
>5	7 (5.07)

The different indicators of quality of surgery like operating time, blood loss and number of hospital days are tabulated in table 3. The mean operating time was 60.96 ± 15.62 minutes, mean blood loss was 161.88 ± 85.79 ml and mean hospital stay was 3.06 ± 2.53 days.

Post-operative pain for which injectable pain killers are to be continued for a period of 2 days was reported by 76 (55%) patients. Prolonged injectable antibiotics (More than one day) were not needed in any of the patient. The most common complication was febrile morbidity (n=13) followed by urinary tract infection (n=9), blood transfusion (n= 8), diarrhoea (n=5) and persistent foul smelling discharge (n=3). There was no patient with any of such complication like bladder injury, bowel injury, ureter injury, hematoma or secondary haemorrhage.

All the patients were given routine post-operative care and discharged in stable condition.

DISCUSSION

Vaginal approach to hysterectomy is considered the hallmark of the gynaecological surgeries due to its least invasive route of all other routes as well as utilizing an anatomical natural orifice. Uterus with normal dimensions or enlarged in longitudinal direction instead of horizontal enlargement, with good mobility instead of fixed one, large broad pelvis which allows manoeuvrability of delivering as well as debulking procedures, and hands-on experience of operating surgeon are favourable factors for a Non-Descent vaginal hysterectomy. Various techniques like bisection, myomectomy, wedge resection, slicing method and coring may be used either individually or in combination for successful removal of the enlarged uteruses due to fibroids or adenomyosis vaginally.[6, 7, 8]

In literature we have found some studies those results are comparable to our study. Mostly studies we have found are comparable studies between different routes of hysterectomy. Lee et al have done a meta-analysis comparing eighteen studies in which one thousand six hundred eighteen (1618) patients were included. They did not show any differences in intra-operative or postoperative complications, conversion to abdominal hysterectomy, and postoperative pain on the day of surgery and at 48 h, length of hospital when they compare between Vaginal Hysterectomy and Laparoscopic Hysterectomy. But duration of surgery was significantly less through vaginal route.[5]

Shanthi et al done study on twenty five women belonged to age group of 40-50 years and majority of the women were para 2 & above. They have found that the most common presenting complaint was menorrhagia (76%) with common indication for hysterectomy was fibroid uterus (n=13). Majority of the patients (n=17) had uterine size < 10 weeks. They have used different de-bulking procedures like bisection, myomectomy, coring or combination of these techniques to remove the bigger size uterus in 10 women. The mean operating time in their study was 60 ± 15 min, mean blood loss was 150 ± 20 ml and mean hospital stay was 4-5 days. 2 The results of this study are comparable to our study.

Shenoy et al had done a study on 80 patients comparing Non Descent Vaginal Hysterectomy (NDVH) & Total Abdominal Hysterectomy (TAH). Mean operative time was comparable in both NDVH and TAH arms (98.8 ± 30.32mins vs 99.5 ± 26.69mins). 24 patients (60%) in vaginal hysterectomy group underwent reduction techniques. Different reduction techniques were bisection of uterus (46%), bisection with myomectomy (37%) and myomectomy alone (17%). In NDVH group, mean hospital stay, intraoperative blood loss and postoperative complications like febrile morbidity as well as wound infection was significantly less.[4]

In a study by Sarkar et al the mean age of women was 48.74 years in NDVH, compared to AH with a mean age of 46. 12 years. (P<0.05) The abdominal route of surgery was significantly much lengthier than vaginal route (AH 72.30 minutes vs NDVH 42.16 minutes, p <0.001). Intraoperative blood loss as well as post-operative pain was significantly higher in the AH group rather than NDVH. [9]

Sharada et al in their study comparing NDVH with total laparoscopic hysterectomy (TLH) found that the 41–50 years was the most common age and fibroid uterus was the most common indication for surgery in both groups. There was statistically significant difference in mean operative time (40min vs 120min) and mean blood loss (50ml vs 120ml) in NDVH group in comparison to TLH group. They have found that the both the groups were similar in post-operative analgesia requirement, post-operative hospital stay and post-operative complications.[3]

BC et al and Goswami D et al done studies showed that time required in NDVH were less in comparison to TAH. They found that the 80% cases of NDVH were finished

within ninety minutes whereas time required for TAH cases were mostly more than 90 minutes.[10, 11]

In a study by Pranathi et al, the mean blood loss in TAH was 235 ± 46.89 ml and in NDVH was115 ± 41.35 ml respectively, with statistically significant (p <0.001) difference. Duration of operation for TAH was 153.82 ± 38.15 minutes and in NDVH was 108.36 ± 31.47 minutes respectively with statistically significant (p value< 0.0001) difference. Other statistically significant findings in their study were better pain score (VAS) on day 3 and lesser hospital stay in NDVH group in comparison to TAH group.[12]

Limitation

This is a single centre study with small sample size. Secondly no comparison was done with any other route of hysterectomy.

CONCLUSION

Vaginal hysterectomy can safely be performed and should be considered upon non-prolapsed uterus with adequate vaginal access, good uterine mobility and with necessary technical skill. The additional advantages are of shorter duration of surgery, lesser intraoperative complications, lesser postoperative morbidity like febrile morbidity or better pain scores, no need of costly instruments and shorter hospital stay. Hence, it can be concluded that Non Descent Vaginal Hysterectomy (NDVH) should to be taught during residency or special training can be given.

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