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A Study of Personal Experience of NDVH as a Biginning of Gynaecological Practice

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Abstract: *When choosing the route and method of hysterectomy, the physician should take into consideration how the procedure may be performed most safely and cost-effectively to fulfil the medical needs of the patient.*
In our study, a total of 60 patients admitted to gynecological ward requiring hysterectomy for benign diseases in the absence of uterine prolapse without suspected adnexal pathology were taken for study.
There is considerable need of time and good assistant for modern gynaecologists to master this technique in advancing patient friendly minimal invasive surgeries . (from LAVH to TLH).
Operating time is directionaly proportional to surgeon,s experience and better assistant during surgery.With adequate vaginal access ,with good assistance and good uterine mobility.

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I. Introduction

Hysterectomy is the most common major gynecological surgical procedure.

Abdominal hysterectomy is the most commonly performed surgery with 70:30 ratio for abdominal versus vaginal route[1]. Hysterectomies are performed vaginally, abdominally, or with laparoscopic or robotic assistance. The first successful TAH was performed by Charles Clay at Manchester (1843 A.D.) & Conrad Lagenbeck of Gottingen performed the first planned vaginal hysterectomy in 1813[,2].

NDVH is literally an innovative highly qualitative procedure where the uterine mass is exteriorized through the natural orifice resulting in an invisible minimum scar Vaginal route for non-descent uterus is an acceptable method of hysterectomy.Over the time many changes have occurred in the modes of hysterectomy but in the present scenario where patients desire to get scar less surgery at an affordable cost, vaginal route will prove its worth by being the most satisfying, cost effective and safe method of hysterectomy as compared to other routes both for the surgeon and the patient. On the other hand, non descent vaginal hysterectomy is associated with less morbidity, lower health care costs, lesser hospital stay, minimal complications and better patient satisfaction compared to laparoscopic techniques[3] vaginally despite well-documented evidence that vaginal hysterectomy has distinct health and economic benefits in terms of fewer complications, better post-operative quality-of-life outcomes, and reduced hospital charges. When choosing the route and method of hysterectomy, the physician should take into consideration how the procedure may be performed most safely and cost-effectively to fulfil the medical needs of the patient. Most of us find it easier to perform abdominal hysterectomy through a wide-open incision and find excuses to avoid vaginal route.There is ample opportunity to learn and master vaginal mastered. To maximize the proportion of hysterectomies performed vaginally, gynecologists need to be familiar with surgical techniques for dealing with non prolapsed uterus.

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The common limitations for vaginal hysterectomy in nonprolapsed uterus (NDVH) include size of the uterus, nulliparity, previous pelvic surgery or lower segment caesarean section (LSCS), pelvic adhesions and endometriosis[,4].Patients with large uterus necessitates adjunctive procedures in terms of myomectomy, bisection debulking, bisection of uterus, coring and clampless approach [5].The aim of this study is to present our experience of non-descent vaginal hysterectomy (NDVH) for benign gynecological diseases and stressing on the fact that vaginal hysterectomy for non-descent large uterus is safe and the surgeon's expertise carries the most important prerequisite criteria rather than giving much emphasis on the size and adequacy of vaginal access for NDVH.

Laparoscopic route is enjoying much popularity in these two decades. However, laparoscopic hysterectomy is associated with higher costs, longer duration of surgery, specially trained personnel and risks related to laparoscopy[,6]

II. Method

The study was conducted in dept. of OBG Zydus medical college.

In 2018 and 2019. A total of 60 patients admitted to gynecological ward requiring hysterectomy for benign diseases in the absence of uterine prolapse without suspected adnexal pathology were taken for study.Patients requiring hysterectomy for benign gynecological disorders without prolapse (DUB, fibroid, adenomyosis, PID,etc) were posted for non descent vaginal hysterectomy.

The patients with the following diagnosis were considered as inclusion criteria- dysfunctional uterine bleeding (DUB), leiomyoma, adenomyosis whereas the exclusion criteria was uterus size > 20 weeks, genital malignancies, complex adnexal mass. Prerequisites for non descent vaginal hysterectomy (NDVH) were set as uterine size not exceeding 16 weeks of gravid uterus (by clinical judgment) and adequate vaginal access with good uterine mobility. Exclusion criteria included uterus with restricted mobility, suspicion of malignancy, complex adnexal masses. A written informed consent was taken from all patients after explaining the procedure and Special consent for conversion to abdominal hysterectomy if needed, was taken. Pre-operative investigations were done.

All cases were done under regional anesthesia, either spinal or epidural. Both anterior and posterior pouches were opened one after another. Uterosacral and cardinal ligaments were clamped, cut and ligated. Clamping of uterine vessels was done bilaterally. If at this time the uterine size did not allow an easy exteriorization then debulking techniques like morcellation, bisection, decoring, myomectomy, or a combination of these methods were done. After delivering the uterus in the vagina, hysterectomy was completed in the usual manner. Blood loss was calculated by noting the number of Mops used during surgery and blood collected in suction bottle. Post-operative catheterization with Foley's catheter was done in all cases for 24 hours.Post-operative complications like fever, urinary tract infection, vaginal cuff cellulitis, vaginal bleeding is noted. All patients were followed from time of admission to time of discharge and 2 weeks thereafter. Data regarding age, parity, uterine size, estimated blood loss, length of operation, complications and hospital stay were recorded

III. Results

Indication.....

	percentages	Number
AUB	60	36
Fibroid	22	13
Adenomyosis	15	9
Simple hyperplasia	3	2

Age distribution...

Age(years)	Number	percentages
35-40	9	16
41-45	35	58
46-50	12	20
>50	4	6

Parity

Parity	Number	percentage
nullipara	0	0
P1+0	2	3
P2+0	24	40
P3+0	34	57

Comorbidities

obesity	6
hypertension	10
DM	2
Anaemia	20
Cholelithiasis	2

Size of uterus

Size(wks)	Number	percentage
Up to 8 wks	48	80%
8 t0 12 wks	10	18%
12 to 20 wks	2	2%

Type of surgical procedure

name	number
NDVH	45
NDVH+BSO	14
NDVH+UNILATERAL SALPHINGOOPHERECTOMY	1
MINILAPROTOMY	0

Clinical outcome

	Out come	
1	Mean operating time	64 minutes
2	Mean blood loss	100 ml
3	Mean hospital stay	4 days

Duration of operation

Hours	Number	%
25-40 min	16	28
40-60 min	24	40
60-90min	18	30
>90min	1	2

Duration of stay after operation

Hours	Number	%
<24	18	30
24-48	36	60
48-72	4	8
>72	2	2

Significant perioperative events

Complications	number
Bladder injury	2
Difficult approach (minilaprotomy)	0
Difficulty in morcellation	2
2nd haemmrage	1
UTI	8
Blood transfusion	3
Anaesthetic complications	0
Urinary tract fistula	0
Febrile morbidity	2
Pelvic abcsess	0

IV. Discussion

Abdominal route is the most commonly opted route for hysterectomy**.** Thomas G Stovall et al found that 70% to 80% of hysterectomies are performed by abdominal route and vaginal approach is usually

reserved for utero-vaginal prolapse.[7] Most common indication of NDVH in our study was dysfunctional uterine bleeding not responding to conservative treatment (52 %) and second most common indication was fibroid (22%). Shital Mehta et al, Bhadra B et al also reported DUB as a most common indication.[8,9]

Most common age group underwent for non descent vaginal hysterectomy was 41-45 years (60%). This was similar to studies of Bhadra B et al [9,]Maximum number of cases had parity 3 & more (72%)..In majority of cases in our study, uterine size was less than 8 weeks (64%).Mean time for operation in this study was 64 minutes. Mean blood loss was 100 ml. Most of the patients were discharged within 4 days.With adequate vaginal access and good uterine mobility, vaginal hysterectomy can be easily performed. Initial descent can be obtained by cutting Mackenrodt's & uterosacral ligaments.In this study majority of the patients were in the age group of 41-45 years and most of them were multiparous, which is comparable to other studies. The commonest indication was DUB (60%) and next common was fibroid uterus (22%). In our study 45 patients had only NDVH, 14 had NDVH with salpigoophrectomy, and 1 patient NDVH with unilateral SPO.

Nowadays Fibroid up to 16week size and adnexal pathology can be also removed vaginally by using different morcellation techniques.In our study none of the cases had abdominal pelvic surgery.

Operating time & blood loss were directly proportional to the size of uterus &presence of fibroid.

Three of the patients required blood transfusion, which is same as shown by CREST study.

Mean duration of surgery was 58.75 minutes as compared toGoel et al (64 minutes)[10], Dewan et al (54.5 minutes)[11,]Bharatnur et al (65minutes) ([12),]and Bhadra (55minutes) [13].

Debulking was done when the uterine size was more then 8 wks. Among all of large uterus debulking and bisecting of the uterus remained the common technique, which was shown by other study also18. Major

complications were less due to prior and proper selection of cases. In one case there was urinary bladder injury due to previous adhesion.which is comparable with other studies also6.In conclusion it can be said that in properly selected cases non-descent vaginal hysterectomy can be performed easily and safely at expert hand, whichreduces the patient's trauma and hospital stay.Considering the fact that it does not need to make any extra hole for the procedure, this route should be the choice of hysterectomy in all DUB cases as well as in myoma and adenomyoma if size of the uterus is reasonable. Though comparative study with abdominal hysterectomy and laparoscopic hysterectomy would give a better conclusion, this small observational study proved safety of the procedure.The stay was shorter than the average stay of 7-8 days for abdominal hysterectomy in our hospital.

Different morcellation techniques like bisection, bisection with myomectomy & wedge resection were used in this study.. Nowadays Fibroid up to 16week size and adnexal pathology can be also removed vaginally by using different morcellation techniques. We did not encounter any bladder, ureteric or bowel injury. Operative injuries during vaginal hysterectomy are relatively rare.

Advantages of doing NDVH over abdominal hysterectomy are absence of scar, no adhesions, no risk of incisional hernia, no wound gape and associated uro-gynecological procedures can also be performed. Operative time, blood loss, anaesthetic complications, chance of injury to bowel, bladder and ureter, bowel handling leading to paralytic ileus is lesser than abdominal approach.

Shorter hospital stay, fast recovery, low cost, less thrombo-embolic phenomena, less mortality and morbidity are other merits of the vaginal approach.

V. Conclusion

There is considerable need of time and good assistant for modern gynaecologists to master this technique in advancing patient friendly minimal invasive surgeries . (from LAVH to TLH).

Operating time is directionaly proportional to surgeon,s experience and better assistant during surgery.With adequate vaginal access ,with good assistance and good uterine mobility.

Proper case selection is also important.Before switch over to TLH sound experience of NDVH is fruitful for biginers ,for better satisfactory result of minimal invasive surgeries utility.

Thus this scarless approach should be chosen as a preferred method of hysterectomy.

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