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Non Descent Vaginal Hysterectomy (NDVH): An Experience of 508 Cases.

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ABSTRACT

The aim of the study is to present the varied indications, anticipated risk and the perioperative outcomes of NDVH in 508 cases in a tertiary care institution of India. All patients requiring hysterectomy for benign gynecological disorders who did not have any uterine descent were recruited for this study. Total 508 vaginal hysterectomies were performed during the study where 292 cases (57.4%) were in the age group of 40 to 44 years. Dysfunctional uterine bleeding was the commonest indication (284 cases, 56%). Complications were negligible. Hence 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 the adequacy of the vaginal access for NDVH.

KEYWORDS : nondescent vaginal hysterectomy, NDVH, hysterectomy

Introduction

Hysterectomy is a common gynecological surgical procedure. This procedure is performed by either abdominal or vaginal or laparoscopic route. Laparoscopy assisted vaginal hysterectomy (LAVH) and total laparoscopic hysterectomy (TLH) consumes more cost [1], duration of operation, and requires specialized skill to perform this procedure. Vaginal hysterectomy is cost effective and is less morbid procedure [2]. It has a cosmetic value as well as can be safely performed in obese individuals. Patients with large uterus necessitates adjunctive procedures in terms of myomectomy, bisection debulking, bisection of uterus, coring and clampless approach [3].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.

Materials and Methods

It was an interventional prospective study conducted in the department of obstetrics and gynecology, VIMS, Ramakrishna Mission Seva Pratishthan, Kolkata, India, over a period of January 2011 to December 2014. 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. Ligasure device which is a combination of pressure and energy was used to create vessel fusion and achieve hemostasis. All patients were subjected to history-taking and clinical examination. Few cases were posted for examination under anesthesia in operation theatre to corroborate the clinical findings in terms of mobility, size of uterus, vaginal access and tone of the pelvic muscles. Regional anesthesia, either spinal or, epidural was followed by dressing and draping of abdomen and perineum with proper positioning of the patients. Anterior lip of cervix was held with vulsellum and infiltration done at cervico-vaginal junction with 20 units of vasopressin in 50 ml normal saline. A circumferential incision around the cervix was made followed by cutting of pubo-vesico-cervical ligament and cephalad mobilization of urinary bladder. The anterior and posterior pouches were opened. Uterosacral and cardinal ligaments were clamped and sealed using vessel sealing device [Figure 1] followed by cutting which was then followed by clamping of uterine vessels bilaterally and cutting in similar manner. Large sized uterus needed morcellation techniques like debulking, myomectomy, bisection of the uterus or combinations of these procedures (Figure 2) after sealing of the uterine vessels. Those fibroids which were hindering the expulsion of uterus needed myomectomy. This was followed by clamping on uterine cornu containing round ligament, ovarian ligament and medial part of fallopian tube. To remove ovaries, round ligament was clamped separately followed by clamping of infundibulopelvic ligament by vessel sealing device. After delivery of the uterus (with ovaries) hysterectomy was completed in usual fashion [Figure 3]. Postoperative catheterization with foley's catheter was done in all cases for 8- 12 hours depending on the need.

Results

Total number of hysterectomies carried out during the study period was 508. The indication of vaginal hysterectomy is illustrated in table 1.

Table 1 Indications of vaginal hysterectomy

Disease	Number of cases	Percentage (%)
DUB	280	55
Fibroid	192	38
Adenomyosis	20	0.04
Simple hyperplasias	16	0.03

There was associated ovarian cyst- 28 cases for which oophorectomy were also performed. Out of 508 hysterectomies, 144 patients had some sorts of previous surgery on uterus.

The following is the age distribution of patients undergoing vaginal hysterectomy.

Table 2 Age distribution

Age (yrs)	Number	Percentage (%)
35- 40	184	39
41- 45	244	48
46- 50	64	12.5
>50	16	0.5

Table 3: Parity of patients

Parity	Number	Percentage (%)
Nullipara	8	0.01
P 1+0	160	31.5
P 2+0	284	56

P 3+0	56	11

The comorbidities noted in these patients are shown in table 4.

Table 4- Comorbidities

Name	Number
Obesity (BMI> 35)	32
Hypertension	20
Type 2 diabetes	16
Severe anemia	8
Cholelithiasis	8

The size of the uterus on palpation is illustrated in table 5

Table 5- Size of uterus on abdominal examination

Size (weeks)	Number	Percentage (%)
Upto 8	296	58
>8 - 12	144	28
12 – 16	48	8
>16 - 20	20	6

The following procedures were performed in our patients as shown in table 6

Table 6 Type of surgical procedures

Name of surgical intervention	Number
Only NDVH	372
NDVH + bilateral salpingoophorectomy	116
NDVH + unilateral salpingoophorectomy	12
LAVH + bilateral salpingoophorectomy	4
Mini laparotomy	4

The operating time for the completion of surgeries are illustrated in table 7-

Table 7 Duration of operation

Time (minutes)	Number	Percentage (%)
25-40	304	60
40- 60	124	24.5
60-90	68	13
> 90	12	0.05

The duration of stay of patients after surgery is illustrated in table 8

Table 8 Duration of stay after operation

Duration (hours)	Number	Percentage
< 24	428	84
24- 48	68	14
48- 72	12	2
> 72	0	0

The perioperative notable events are illustrated in table 9

Table 9 Significant perioperative events

Complications	Number
Bladder injury	4
Difficult approach necessitating minilaparotomy	4
Difficulty in morcellation	4
Secondary hemorrhage	1
UTI	16

Blood transfusion - 2 patients.

Discussion

It is a well-known fact that 70% to 80% of hysterectomies are performed by abdominal route and vaginal approach is usually reserved for uterovaginal prolapse [5].The usual contraindications for vaginal hysterectomy are absence of significant uterovaginal prolapse, presence of uterine enlargement, adhesions and the need for oophorectomy. With adequate vaginal access and good uterine mobility, vaginal hysterectomy can be easily performed. The uterosacral and cardinal ligaments, situated in close proximity to the vaginal vault once clamped and cut produce first degree descent. Multiparity, lax tissues following multiple deliveries and decreased tissue tensile strength provide comfort to vaginal surgeon even in the presence of uterine enlargement. The other important reason for the lower proportion of hysterectomies performed vaginally is the presence of uterine enlargement with leiomyomas or adenomyosis. However, bulky uteri can be dealt with techniques like bisection, myomectomy or debulking [Figure 2]. In our study, 508 patients without descent underwent these procedures for successful removal of the uterus. The indications were mostly dysfunctional uterine bleeding, fibroid uterus, adenomyosis and simple hyperplasia [Table 1]. Most of the patients were between 41-45 years [Table 2]. We performed these hysterectomies with the help of vessel sealing device. Davies et al [6] and Mazdisnian et al [7] also reported to these techniques. We were successful in removing uteri of up to 20 weeks size vaginally without any significant increase in surgical complications, blood loss, operative time or hospital stay. Majority of our patients were para 2+0 [Table 3]. Similar findings were reported by Unger [3] who operated upon uteri weighing 200 to 700 gm, without any increase in complications as compared to abdominal hysterectomies. Complications in our study were minor and few though we had patients with comorbidities [Table 4]. No ureteric injuries were found in our series whereas four cases were detected with urinary bladder injury in patients with previous surgery on uterus, all of which was repaired in the same sitting through vaginal route [Table 9]. We did operations under regional anesthesia hence avoiding hazards of general anesthesia which is needed for laparoscopic approach. Vaginal hysterectomy upto 20 weeks uterus was conducted safely in our series [Table 5]. It has been demonstrated that ovaries are visible and accessible to transvaginal removal in most cases [8]. We performed bilateral salpingo -oophorectomy in 116 and unilateral salpingo-oophorectomy in 3 patients without facing difficulties [Table 6]. The total operating time varied between 25 minutes to 90 minutes [Table 7] and around 60% were operated within 40 minutes of induction. The length of hospital stay reported by Dorsey JH et al [9] was 3.5 and 4.5 days for vaginal and total abdominal hysterectomy respectively. In our series the maximum hospital stay was 3 days [Table 8]. Vaginal hysterectomy in women with non-descent and moderately enlarged uteri is safe. A combination of morcellation techniques is often needed and the surgeon needs to be familiar with them. With experience, operative time, blood loss and complications can be reduced considerably. Thus, this scarless approach should be chosen as a preferred method of hysterectomy.

Conclusion

Vaginal hysterectomy is a cost effective and less morbid procedure. It has a cosmetic value. Patients with large uterus may require morcellation, myomectomy, bisection debulking, bisection of uterus, coring and clampless approach. Vaginal hysterectomy in women with non-descent and moderately enlarged uteri is also safe. With experience, operative time, blood loss and complications can be reduced considerably. We should take utmost care while bladder dissection in all cases especially in uterus with previous surgery and be ready to manage the same. Hence there is need for shift from laparoscopic and abdominal approach of hysterectomies to vaginal approach since it involves less cost, less complication, is scarless and allows early return to daily work.

Fig. 1 Clamping followed by sealing of uterosacral and cardinal ligaments using vessel sealing device.

Fig. 2 Large sized uterus necessitating morcellation techniques.

Fig. 3 Delivery of the uterus (with ovaries).

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