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Research Article

VAGINAL APPROACH FOR HYSTERECTOMY IN BENIGN CONDITIONS OF THE UTERUS AT A RURAL HEALTH SETTING

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ABSTRACT
Hysterectomy is one of the most frequently performed surgical procedures in the United States. It can be done by abdominal or vaginal or laparoscopic route. Laparoscopy assisted vaginal hysterectomy (LAVH) and total laparoscopic hysterectomy (TLH) although gaining more popularity, is associated with higher cost, longer duration of operation, and specially trained personnel. On the other hand, vaginal hysterectomy is associated with reduced morbidity and lower health care costs compared to laparoscopic techniques especially in women residing at rural areas.
The objective of this study was to assess the possibility of the vaginal route as the primary route for all the hysterectomies for benign conditions and to evaluate the short term outcome of non descent vaginal hysterectomy.
All the women attending MVJ Medical College from January 2011 to December 2011 and requiring hysterectomy for benign and premalignant conditions were studied. An effort was made to perform as many hysterectomies vaginally with salpingo-oophorectomy where indicated, in the absence of uterine prolapse. Short term clinical outcomes like operating time, blood loss, conversion rates and period of convalescence were noted.
Fifty eight patients underwent non descent vaginal hysterectomy for various benign conditions. The mean age was 40.45±6.74 and mean parity was 2.64±1.10. Most of the cases underwent non descent vaginal hysterectomy for dysfunctional uterine bleeding (39.65%). The dissection was difficult in 22.41% and bringing out uterus was difficult in 13.79%. Time needed for operation was 40± 10.83 min.The requirement of post operative analgesic was minimal by the patient as there was no abdominal wound. The duration of hospital stay was 3-5 days.
Less intra-operative blood loss, less febrile morbidity, low postoperative complications, faster recovery, less hospital stay demonstrate that the vaginal route should be the choice of operation for non-descent cases. It is undeniable that the simple vaginal hysterectomy is less invasive and cost effective than laparoscopy in a rural health setting.

Key Words: *Vaginal Approach, Hysterectomy, Benign Conditions*

INTRODUCTION
Hysterectomy is one of the most frequently performed surgical procedures in the United States. During 2000–2004, approximately 3.1 million hysterectomies were performed (approximately 600,000 per year). The most common indications for hysterectomy are symptomatic uterine leiomyomas (40.7%), endometriosis (17.7%), and prolapse (14.5%). (Whiteman, 2008)
It can be done by abdominal or vaginal or laparoscopic route. Laparoscopy assisted vaginal hysterectomy (LAVH) and total laparoscopic hysterectomy (TLH) although gaining more popularity, is associated with higher cost (Meikle, 1997), longer duration of operation, and specially trained personnel. On the other hand, vaginal hysterectomy is associated with reduced morbidity and lower health care costs compared to laparoscopic techniques (Ransom, 1996) especially in women residing at rural areas. It is preferred in high risk cases like obesity and is cosmetic (scarless surgery). Vaginal hysterectomy is associated with fewer morbidities, lesser hospital stay and better patient satisfaction. Therefore there is a need for expanding indications for vaginal hysterectomy. With increasing concern for limiting health care costs, there is a

need for reviewing the accepted limitations of vaginal hysterectomy and feasibility of performing it in non laparoscopic method. The objective of this study was to assess the possibility of the vaginal route as the primary route for all the hysterectomies for benign conditions and to evaluate the short term outcome of non descent vaginal hysterectomy.

MATERIALS AND METHODS

All the women attending MVJ Medical college from January 2011 to December 2011 and requiring hysterectomy for benign and premalignant conditions were studied. An effort was made to perform as many hysterectomies vaginally with salpingo-oophorectomy where indicated, in the absence of uterine prolapse. All the women with uterine size larger than 16 weeks size, immobile uterus, severe endometriosis, complex adnexal mass and suspected or diagnosed malignancy were excluded from the study. Informed consent was taken in all cases with prior counseling of the possibility of conversion to abdominal hysterectomy if needed. The experience of the surgical team varied. Short term clinical outcomes like operating time, blood loss, conversion rates and period of convalescence were noted.

Operative technique

Under regional anaesthesia(spinal/ epidural), uterine mobility was confirmed before proceeding with the surgery.

During vaginal hysterectomy a circular incision is made around the cervix and dissection done. The vesicocervical ligament is cut, vesicocervical space exposed and bladder mobilized upwards.

The pouch of Douglas is exposed next. After this mackenrodts and uterosacral ligaments cut and transfixed. Then uterine vessels cut and transfixed. Third clamp applied to adnexal structures, cut and transfixed. The time of operation was calculated from the time of incision to the time of dressing. The following parameters were assessed

Per operative blood loss

Difficulty in dissection

Difficulty in delivery of the uterus

Post operative complications.

All patients received prophylactic antibiotic Inj. Cefotaxime 1gm IV stat. Blood loss was calculated by noting the number of Mops used during surgery and amount of blood collected in suction bottle. Measurement of Mops used in present study was 34 cm x 24 cm. On an average ¼ soaked Mop contained 20 ml, ½ soaked 40 ml and fully soaked 100 ml. This is rough estimation of blood loss. Intra-operative complications like injury to the bladder/bowel/ ureter were noted. Post operatively, all patients were meticulously followed. On 3 rd post-operative day, Routine hemoglobin estimation and urine examination was done. Post-operative complications like fever, urinary tract infection, vaginal cuff cellulitis, were noted.

Statistical analysis was done using SPSS software Version 15. Mean and standard deviation was calculated. All the patients were advised to attend the outpatient department two weeks after discharge from hospital to note their well-being or any late complications like vaginal discharge, urinary/bowel symptom.

RESULTS

Fifty eight patients underwent non descent vaginal hysterectomy for various benign conditions. The mean age was 40.45±6.74 and mean parity was 2.64±1.10 as depicted in table 1. Most of the cases underwent non descent vaginal hysterectomy for dysfunctional uterine bleeding (39.65%) as shown in table 2.

Table1: Shows patient characteristics

	Mean ±SD
Age in yrs	40.45±6.74
Parity	2.64±1.10

Table 2: Shows indications for hysterectomy

Indications	**Number (n=58)**	**Percentage**
Dysfunctional uterine bleeding	23	39.65
Chronic PID	15	25.86
Fibroid uterus	12	20.68
Adenomyosis	8	13.79

Table 3: Shows size of uterus

Size of uterus	**Number**	**Percentage**
6 weeks	22	37.93
8weeks	28	48.27
10weeks	7	12.06
12weeks	1	1.72

With regard to size of uterus (table 3) in some cases with large uterus and in difficult delivery the size of the uterus was reduced by enucleation or bisection. Ovaries were removed in indicated cases through vaginal route (table).

Table 4: Shows type of operation

Type of operation	**Number**	**Percentage**
Hysterectomy	49	84.48
Hysterectomy with unilateral salphingoophorectomy	8	13.79
Hysterectomy with bilateral salphingoophorectomy	1	1.72

Table 5: Shows intra operative course and post operative stay

		Number	**Percentage**
Dissection	Easy	45	77.58
	Difficult	13	22.41
Bringing out uterus	Easy	50	86.20
	Difficult	8	13.79
Time needed for operation Time(Min) Mean±SD		40± 10.83 min	
Mean blood loss		150-200 ml	
Length of stay		3-5 days	

The dissection was difficult in 22.41% and bringing out uterus was difficult in 13.79%. Time needed for operation was 40± 10.83 min (Table 5).

The requirement of post operative analgesic was minimal by the patient as there was no abdominal wound. The duration of hospital stay was 3-5 days.

DISCUSSION

It is well known fact that 70-80% of hysterectomies done for benign conditions are through abdominal route. Vaginal hysterectomies are usually performed for prolapse cases. The reason behind this is inadequate technical skills, presence of uterine enlargement which makes vaginal route difficult. But with newer techniques like bisection, morcellation and myomectomy it has become easy to perform vaginal hysterectomy even in enlarged uterus in benign cases (DewanRupali, 2004).

In our study most of patients were in the age group of 40-49 years of age which was well compared with the study carried out by Tariq Miskry *et al.*, (2003). The mean age in our study patients was 40.45±6.74 which is comparable to the study done by kovac *et al.*, (2002). The mean parity in our study was 2.64±1.10 which is comparable to the study done by Susan M. Taylor (2003).

Table 6: shows indications for non descent hysterectomy in various studies.

Indications for hysterectomy	**Present study (percentage)**	**Sunanda Bharatnur (S. Bharatnur, 2011).**	**Anthony devis *et al*(Anthony Davies 1998)**	**Raymond C Doueettee *et al.*,(Raymond C Doueettee, 2001)**
Dysfunctional uterine bleeding	39.65	48	43.7	44.8
Chronic PID	25.86	-	-	-
Fibroid uterus	20.68	12	33.7%	35.2%
Adenomyosis	13.79	4.4		-
Cervical dysplasia	-	4	4.4	-

In most of the studies most common indication for non descent vaginal hystetectomy was Dysfunctional uterine bleeding which is comparable to our study. In our study second common indication was chronic PID where as in other studies it is fibroid uterus.

With respect to size of the uterus and delivery of the uterus, we had difficulty in delivery of uterus in 8 patients which was accomplished by morcellation and or enucleation of leiomyoma. Kumar and Antony (2004) successfully carried out vaginal hysterectomies in 95% (76/80) and 60 of their patients needed morcellation or hemisection or myomectomy. They consider vaginal hysterectomy safe upto 12 weeks size According to Das and Sheth (2004) the preoperative sonographic estimation of uterine volume and the findings at examination under anesthesia help in choosing the vaginal route. They needed debulking for uteri with a volume of more than 300cm3.It has been demonstrated that ovaries
are visible and accessible to transvaginal removal in most cases (Kovac, 1996).

The mean time for surgery in our study was 40± 10.83 min which is comparable to the study by Pradeep Garg (2003) where it was 41.20 min.

The length of hospital stay reported by Dorsey JH *et al.*, (1995) was 3.5 days which is comparable to our study ie 3-5 days.

Two patients required blood transfusion following surgery. Four patients had febrile morbidity.

Our study shows that in patients with non prolapsed uterus and who require hysterectomy for benign conditions vaginal hysterectomy is associated with significantly shorter hospitalization and earlier return to normal work. It is not surprising that patients reported less discomfort and faster recovery after vaginal hysterectomy in the immediate post-operative period. So vaginal hysterectomy has to be attempted in every patient who requires hysterectomy.

CONCLUSION

All the patients without uterine prolapse submitted to vaginal hysterectomy for the treatment of benign disease had some advantage in relation to abdominal hysterectomy. Less intra-operative blood loss, less febrile morbidity, low postoperative complications, faster recovery, less hospital stay demonstrate that the

vaginal route should be the choice of operation for non-descent cases. Vaginal hysterectomy is least invasive route, safe and effective procedure for benign non-prolapsed cases. Besides the faster recovery and lower incidence of blood transfusion and other complications, vaginal route lowers cost for Health System. It is undeniable that the simple vaginal hysterectomy is less invasive than laparoscopy.

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