



Original Research Article

Observational study for evaluation of clinical outcome of non-descent vaginal hysterectomy

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Abstract

Introduction: Hysterectomy is the fairly common operative procedures carried out in the gynecological practice. Abdominal hysterectomy has its own limitation in high risk groups and had post operative complications. So the present study was undertaken with objective to find out the efficacy of vaginal hysterectomy in other than prolapse patients to assess its safety and to determine efficacy of adjunctive procedures by vaginal route.

Material and methods: Total 60 patients having indication had vaginal hysterectomy without vaginal prolapse having uterus up to 14 weeks size. Patients having capability of lithotomy position and adequate vaginal access were included in the study. Patients suspected or undiagnosed malignancy of urogenital organs and associated other pelvic pathology or abdominal pathology was excluded. After thorough general and systemic examination after USG patient were posted for vaginal hysterectomy. Preoperative and post operative complications were noted and managed accordingly.

Results: In present study 80% of the patients were above the age of 40 years. 76.7% of the vaginal patients were having parity 3 or more. Most patients were having more than one complaint. But most common complaint among them was menstrual irregularities and associated medical problems were noted in 51.7% patients. Previous abdominal or pelvic surgery was not a contraindication for vaginal surgery. Most common indication for vaginal hysterectomy was fibroid Uterus in 41.7% and dysfunctional uterine bleeding 38.3%. In the present series, patients with fibroid size up to 14 weeks were operated vaginally successfully. The amount of blood loss was less than 50 ml in this study. Significant blood loss requiring blood transfusion was not found in this study. There was no bladder



or bowel injury the special techniques used was bisection, myomectomy, morcellation and combination. The most commonly used technique was bisection. Mean duration to complete vaginal hysterectomies was 48.6 minutes, period more than that was required when there was presence of concurrent A and P repair. No patient required blood transfusion maximum i.e. 63.3% patient's blood loss was less than 50 ml. There was no bowel or bladder injury during procedure and immediate post operative pain. Febrile episode and UTI was complained with no long term complications. Average hospital stay was 3 days.

Conclusion: Vaginal hysterectomy in patients with up to 14 weeks for non-descent large uterus is safe and practical. It ensures minimal blood loss, early postoperative recovery, early ambulation, reduced duration of hospital stay.

Key words

Vaginal hysterectomy, Menstrual complaint, High risk group, Complications.

Introduction

Hysterectomy is the fairly common operative procedures carried out in the gynecological practice. Although vaginal hysterectomy is associated with fewer complications and a faster recovery [1] more than two thirds of the hysterectomies are done abdominally [2, 3].

The obvious advantage of vaginal route over abdominal and laparoscopic in terms of operative time, morbidity, duration of hospital stay, and cost has been examined by a number of authors in their studies [1, 4].

But due to lack of training and experience there is a reluctance to perform the vaginal procedure in the presence of significant uterine enlargement, the absence of uterine prolapse, in nulliparous women, after previous pelvic surgeries or where hysterectomy has to be combined with oophorectomy [5].

The commonest indication for vaginal hysterectomy remains the treatment of utero-vaginal prolapse or vagino-uterine prolapse where as uterine fibroids and menstrual problems which are the most frequent indications for surgery are to be managed by abdominal hysterectomy [2, 3].

Abdominal incision and then morbidity associated with tissue trauma and damage to neurovascular bundles, and associated factors like obesity and medical disorders like Diabetes mellitus; hypertension makes the abdominal route less favorable.

There is no doubt the vaginal route of surgery is far superior to abdominal route and laparoscopic hysterectomy. It is important to know how feasible would be it to do vaginal hysterectomy in patients other than prolapse.

So the present study was conducted with the objective of to assess the efficacy of performing vaginal hysterectomy in cases other than prolapse, assess its safety and to evaluate complication of adjunctive procedures after completion of procedure.

Materials and methods

This study was carried out in LT Municipal Medical College and Hospital, Sion from 2007 to 2009. In patients undergoing vaginal hysterectomy for causes other than prolapse.

An inclusion criterion of patients was uterus up to 14 weeks gestational size, uterine mobility,



capable of proper lithotomy position and adequate vaginal access.

Patients suspected or undiagnosed malignancy of urogenital organs, undiagnosed postmenopausal bleeding, Other pelvic pathology, associated abdominal pathology, endometriosis, where lithotomy position cannot be given for orthopedic or neurological condition were excluded from study.

General and systemic examination was done to rule out any major medical illness complicating surgery like Diabetes mellitus, hypertension, asthma, obesity, heart disease etc. and appropriate treatment and fitness ensured. Gynecological examination included per speculum examination, per vaginal examination size of the uterus, mobility of the uterus, assessment for the available space around uterus and the presence of adnexal pathology was looked for, and special mention was made if the patient had undergone any previous abdominal surgery or LSCS.

The patients were thoroughly examined and preoperative biochemical investigations carried out, preoperative ultrasonography was done to confirm the clinical findings. After proper preoperative preparation, vaginal hysterectomy was done.

Procedure

Anesthesia was either spinal or general depending upon the patient's general and medical condition. The technique followed in this study was based on careful anatomic dissection, meticulous attention to detail, steps done in logical sequence, and concern for prevention of immediate and late complications.

After the uterus was removed, restoration of normal anatomy and support was the major concern. Support for the vaginal vault and upper

posterior vaginal wall especially was provided in such a way that the vagina will remain in its normal position for the remainder of patient's life.

The uterine fundus was then delivered out either through anterior or posterior cul-de-sac and the cornual structures were clamped, cut and transfixed.

After clamping and securing the uterine vessels, the next step depended upon the size and characteristic of the uterus.

It was very important that proper techniques were carried out only after securing of uterine vessels as the operation become relatively bloodless after this.

After delivery of the uterus the tubes and ovaries were inspected and adnexa were removed where ever necessary. Hemostasis was achieved and confirmed.

The peritoneal cavity was closed and the vault is suspended and closed. The vault of the vagina was closed with a few interrupted sutures of number 1/0 chromic catgut. Any additional operative procedure as anterior colporaphy or posterior colpoperineorrhaphy was done as and when indicated along with vaginal hysterectomy also vaginal pack were kept.

Patient had routine post operative management of intravenous fluids, sedation as required and antibiotics. In absence of any complications, the patients were discharged on the fourth day and were called for follow up 2 weeks. After discharge or earlier if they had any complaints. Intra-operative complications were noted. Blood loss was counted by changes of water in mop. 30x30 cm size mops were used in all surgeries. Each change of mop was considered equal to 50 ml. All other intra-operative and post operative

complications such as urinary retention, dysuria, diarrhea, vomiting, paralytic ileus were noted. Statistical analysis of observations was presented in frequency and percentage distributions.

Results

A total 60 patients underwent vaginal hysterectomy for non-prolapse benign conditions of uterus within 38 to 59 years age group with mean age of 44.7 years.

As per **Graph - 1**, the largest number 40% (24) of females were in between 41-45 year age group. 80% of patients were above 40 years age. Most of patients i.e. 76.7% (46) were multiparous and 20% (12) patients para 1 and 3.3% (2) were para 1. There was no nulliparous patient in this study.

Out 51.7%(31)patients having associated high risk factors 16 patients were having medical disorders like Hypertension in 7, Diabetes Mellitus in 6, Bronchial Asthma in 2 and I had IHD while 15 patients were obese.

There were 21.7% (13) patients with history of previous surgery, 7 had cesarean section, two patients had conservative surgeries for prolapse, 4 females had history of appendicectomy.

Most patients were having more than one complaint. But most common complaint among them was menstrual irregularities (**Table - 1**).

Ultrasound was useful in confirming the clinical diagnosis in diagnosing the size of the uterus, the number and site of the uterine fibroids and the presence of any adnexal pathology which helped in planning of the surgery. (**Table - 2**)

Dilatation and curettage showed cystic glandular hyperplasia in 20% (12) patients. Cervical biopsy in most of the patients showed chronic

cervicitis. All patients underwent paps smear which were negative for malignancy.

In 63.3% patients' uterus was removed intact, in remaining patients adjunctive procedures were used. Bisection was the most commonly used technique. Myomectomy or Morcellation or lash technique was combined with bisection in some patients. (**Table - 3**)

The most common indication for hysterectomy was fibroid 41.7% (25) patients; second most common was dysfunctional uterine bleeding in 38.3% (23) patients. While 10% (6) had adenomyosis, 6.7% (4) had chronic cervicitis and 3.3% (2) had adenomatous hyperplasia for which hysterectomy was performed.

In more than 63.3% patient's cautery was used. In 21.7% (13) patients neither cautery nor infiltration was used. In patients in whom both cautery and infiltration was used there was less blood loss, while in patients whom neither cautery nor infiltration was used blood loss was more than 150 ml. (**Table - 4**)

Additional to vaginal hysterectomy in 5 patient's unilateral salpingo-oophorectomy was done. In 2 patients bilateral salpingoophrectomy was done, Vaginal hysterectomy with A repair was done in 5 patients and P repair in 4 patients while AP both repair was done in 2 patients.

No patient required blood transfusion. In three patients, there was need of conversion of vaginal into abdominal. There was no bowel or bladder injury. In 3 patients, there was need of abdominal exploration. The mean time required time to complete hysterectomy was 48.6 minutes.

Immediate postoperatively pain was most common complaint among patients i.e. 35%



(21), 13.3% (8) was febrile and 10% (6) had urinary tract infection.

Average hospital stay was 3 days. In patients of patients with A and P repair stay was prolonged up to 4 days.

Discussion

This study includes 60 patients of vaginal hysterectomy for bulky to large uterus of benign pathology up to size 14 weeks. The most common age group of the patients in this study was in between 35 – 45 years of age.

In the studies by Hoffman [6], Magos [7], Dr. Ambiyee [8] and Dr. Sahoo [9] also the patients were between the age group of 35-45 years.

In our study, 76.7% female patients were multipara. Similarly in study by Hassan Amirika [2] and colleagues 74 % patients and Dewan Rupali [10] more than 70% patients were having parity of 3 or more undergoing hysterectomy.

Vaginal hysterectomy is better tolerated by patients with high risk on morbidity of hysterectomy [6, 9, 11, 12] and found vaginal route superior as associated complications were less.

Dense pelvic adhesions around the uterus in women who have undergone previous surgery would make opening of the anterior or posterior cut be sac hazardous, although a method for gaining entry into a scared anterior peritoneum has been described [13].

The common diagnoses in all the studies as well as our studies included fibroid uterus, dysfunctional uterine bleeding and adenomyosis.

Singh Abha, et al. [14] done study vaginal hysterectomy for non prolapsed uterus in this

study most common indication was fibroid uterus.

In one series from the United Kingdom, by Vessy, et al. [3], only 3.9% of hysterectomy for fibroids were carried out vaginally although several techniques have been described for dealing with benign uterine enlargement employing bisection, coring morcellation and myomectomy, there is still a reluctance to use vaginal surgery for the myomatous uteri.

There are some SOGC clinical guidelines for hysterectomy [15] include vaginal hysterectomy should be considered as a first choice for all benign conditions

Das and Sheth, et al. [16] also advocates use of ultrasonography for calculation of uterine volume and assessment of the feasibility of vaginal Hysterectomy.

The largest size of uterus removed vaginally in this study was 14 weeks and it was removed intact. Kumar S. Antony [17] in his study vaginal hysterectomies for non-prolapsed 95% patients needed morcellation, hemisection or myometomy.

Vaginal hysterectomy is an almost entirely extra peritoneal operation. The peritoneum is opened to only a minimal extent and little packing and handling of the intestine is required, because of less manipulation of intestine, postoperative ileus is much less common than with the abdominal hysterectomy, thus oral intake and mobilization of the patient is earlier thus reducing the number of hospital stay. Furthermore, the morbidity associated with an abdominal incision is avoided. The avoidance of an abdominal incision also reduces the depth and length of anesthesia.



Taylor SM et al. compared perioperative complications of abdominal hysterectomy with that of vaginal hysterectomy for the enlarged myomaotus uterus and found that, perioperative complications were increased with the abdominal route [18].

The relative safety of vaginal route of surgery in bladder dissection is easier by the vaginal approach than by the abdominal approach. The main value of laparoscopy for the purpose of hysterectomy remains the assessment and treatment of suspected adhesions or adnexal pathology rather than the hysterectomy itself [4, 5, 7].

In comparative analysis of hysterectomies, significant higher blood loss was observed during abdominal than vaginal hysterectomy by Aniuliene, et al. [19] Hoffman study [6].

In a study, by Dr. Sarita Sahoo [9], vaginal hysterectomy had advantage over abdominal with respect to short operating time, lower morbidity, less postoperative stay, less cost.

In our study majority of normal ovaries were removed vaginally without undue difficulty, also Sheth [20] found that transvaginal removal of the ovaries was possible in 94% undergoing vaginal hysterectomy. In Hoffman study [6] 18% patients of vaginal and 70% patients of abdominal salpingo -ophorectomy was done.

The mean operating time in this study was 45 minutes for vaginal hysterectomy. In Hwang JL, et al. [19] had longest operative time for laparoscopically assisted vaginal hysterectomy than abdominal which also required longer time than that of vaginal hysterectomy. Similarly, less mean operating time of vaginal than abdominal hysterectomy was noted by Hoffman study [6], Magos [7], Dr. Ambiyé's study [8], and by Dr. Sahoo's [9].

In our study mean hospital stay in our study 3 days. Patients of vaginal hysterectomy ambulate earlier, take full diet by day 2, and pass urine as well as stools earlier.

Aniuline R, et al. [19] had experience that mean hospital stay was significantly significant shorter for vaginal hysterectomy as compared to abdominal. In the Hoffaman study [6], 3.6 days (vaginal) vs 5.1 days (abdominal) were noted. In Magos study [7], 3.7 days (vaginal) were noted. In Dr. Ambiyé's study [8] 4.4 days (vaginal) wre noted. But for good success in such difficult vaginal procedures the proper selection of patients is important. The two most important considerations for vaginal hysterectomy when the uterus is considerably enlarged are vaginal vault access and uterine mobility.

Conclusion

Vaginal route being almost extra-peritoneal, hence less invasive the vaginal hysterectomy takes average time with average blood loss due to hydro-dissection technique. As early postoperative recovery, early ambulation, duration of stay is less, minimal complications rate. Decreases short term and long term morbidity and substantially cost. One must be conversant with different alterations in techniques. It is necessary to select a case properly for vaginal surgery. Vaginal hysterectomy for non-descent large uterus is safe and practical provided one is familiar with alternative technique. Thus the safety of operation increases and incidence of complications decreases.

References

1. Dicker R C, et al. Complications of abdominal and vaginal hysterectomy among women of reproductive age in the United States. *Am J Obstet Gynecol*, 1982; 144: 841–848.



2. Amrikia H, Evans T N. Ten year review of hysterectomy: Trends, indications and risks. *Am J. Obstet Gynecol*, 1979; 134: 431.
3. Vessey MP, et al. The epidemiology of hysterectomy. Findings in a large cohort study. *Br J Obstet Gynecol.*, 1992; 99: 402-407.
4. Kovac RS, Cruikshank SH, Retto HF. Laparoscopy assisted vaginal hysterectomy. *J Gynecol Surg*, 1990; 6: 185-193.
5. Querlen D, et al. the impact of laparoscopic surgery on vaginal hysterectomy. *Gynecol Endose.*, 1993; 2: 89 – 91.
6. Hoffman M De, Cesare S, Kalter C. Abdominal hysterectomy versus trans vaginal morcellation for the removal of enlarged uteri. *Am J Obstet Gynecol*, 1994; 171: 309.
7. Magos, et al. Vaginal hysterectomy for the uterus. *Am J Obstet Gynecol*, 1996; 103: 246– 251.
8. Ambiyeh DR. Vaginal hysterectomy for bulky to large uterus. *Bombay hospital Journal of OBGY.*, 2000; 50(2): 187-189.
9. Sahoo Sarita. Vaginal Hysterectomy in Non-descent uterus. *FOGSI/ Feb 2001*.
10. Dewan Rupali, et al. Non –descent vaginal hysterectomy: An experience. *J. OBGY Ind.*, 2004; 54: 4.
11. CME Review. Early complications of Abdominal and Vaginal hysterectomy. *CME Review Obstet Gynecol survey*, 1995; 50(11): 795-805.
12. Isik Akbay EF, Harmanli OH, et al. Hysterectomy in obese womens comparison of abdominal and vaginal routes *Am J Obstet Gynecol*, 2004; 104: 710– 714.
13. Hoffmann MS, Jaeger M. A new method for gaining entry into the scared anterior cul de sac during trans vaginal surgery. *Am J Obstet Gynecol*, 1992; 162: 1269 – 1270.
14. Singh Abha. Vaginal hysterectomy for nonprolapsed uterus. *Obstet Gynecol India*, 2006; 56(2): 152-155.
15. Lefebvre G, Jeffrey J, et al. SOGC clinical guidelines hysterectomy. *J Obstet. Gynaecol. Can*, 2002; 24(1): 37-61.
16. Das S, Sheth S. Uterine Volume: An aid to determine the route and technique of hysterectomy. *J. Obstet Gynecol Ind.*, 2004; 54: 68 -72.
17. Kumar S, Antony k. Vaginal hysterectomy for benign nonprolapsed uterus – An experience. *J. Obstet Gynecol Ind.*, 2004; 54: 60-340.
18. Taylor SM, Ramero AA, et al. Abdominal hysterectomy for enlarged myomatous uterus compared with vaginal hysterectomy with morcellation. *Am J Obstet Gynecol*, 2003; 189(6): 1579–1582.
19. Anulline R, et al. A comparative analysis of hysterectomies. *Medicina (Kanus)*, 2007; 43(2): 118-24.
20. Sheth S S. The place of oophorectomy at vaginal hysterectomy. *Am J Obstet Gynecol.*, 1991; 98: 662–666.

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Graph - 1: Age group (years) of patient's undergone vaginal hysterectomy.

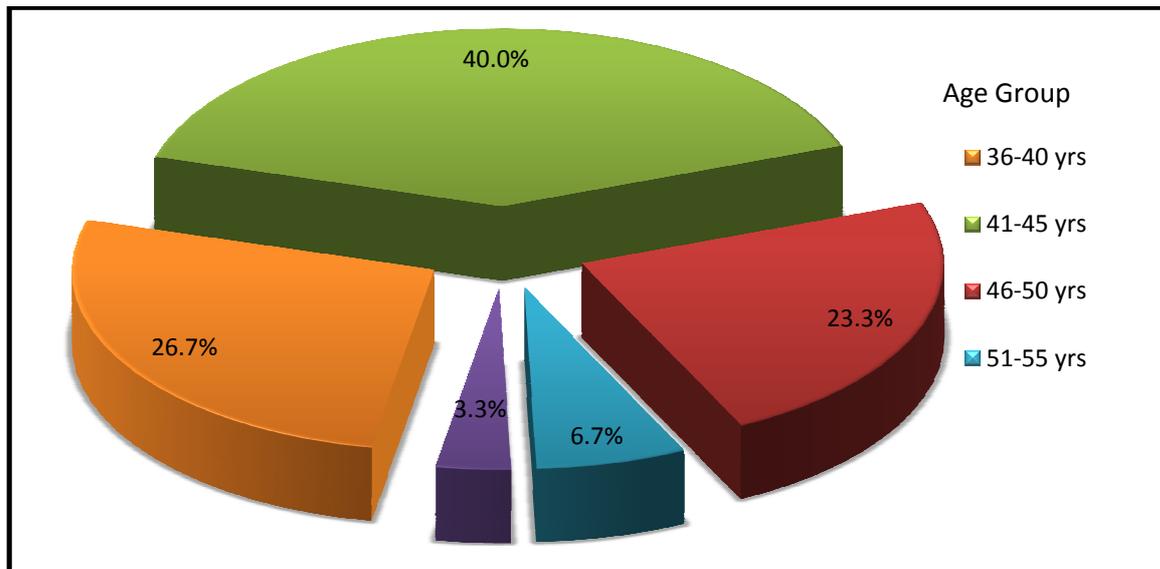


Table - 1: Chief complaints of patients (n=60) undergone vaginal hysterectomy.

Symptoms	No. (%)
Lump in abdomen	12 (20%)
Menorrhagia	18 (30%)
Polymenorrhagia	24 (40%)
Dysmenorrhoea	22 (36.7%)
Chronic pain	12 (20%)
Leucorrhoea	8 (13.3%)

Table - 2: USG findings of patients (n=60) undergone vaginal hysterectomy.

USG Findings	No. (%)
Normal sized	27 (45%)
Multiple fibroids	13 (21.7%)
Anterior wall fibroid	7 (11.7%)
Posterior wall fibroid	5 (8.3%)
Adenomyosis/Bulky uterus	8 (13.3%)

**Table - 3:** Vaginal hysterectomy.

Techniques used	No. (%)
Intact uterus	38 (63.3%)
Bisection only	14 (23.3%)
Bisection with myomectomy	4 (6.7%)
Bisection with morcellation	2 (3.3%)
Bisection with lash technique	1 (1.7%)
Lash technique only	1 (1.7%)

Table - 4: Technique used and amount of blood loss.

Technique	No. (%)	Blood loss
Cautery and infiltration	33 (55%)	<50 ml
Only cautery no infiltration	5 (8.3%)	50-100 ml
Only infiltration no cautery	9 (15%)	100-150 ml
No infiltration/ and cautery	13 (21.7%)	>150 ml