

Clinical study of vaginal hysterectomy at a tertiary care center

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Abstract

Background: Vaginal hysterectomy is considered as signature mark of gynaecologist. The vaginal hysterectomy remains the most minimally invasive technique, with the advantage of quickest recovery, lowest complications, and best cosmesis. With appropriate patient selection, vaginal hysterectomy can be performed most of benign indication. The most common indication for a vaginal hysterectomy is uterine prolapse. Present study was aimed to study vaginal hysterectomy at our tertiary care center. **Material and Methods:** This observational and prospective study was conducted in patients with benign gynecological disorders, size less than 16 weeks pregnant uterus, adequate vaginal access and good uterine mobility. **Results:** Total 164 patients were included in present study. Most common age group in our study was 51-60 years (35.97 %), followed by 51-60 years (35.97 %). 58.55 % patients were postmenopausal and 28.66 % were perimenopausal. Most common indication for hysterectomy was uterine prolapse with cysto-rectocele in 86 patients, followed by adenomyosis in 23 patients and dysfunctional uterine bleeding in 21 patients. Most of our patients had uterine size upto 6 weeks (63.41 %), only 7 patients were had uterine size 12-16 weeks. Common complication was vault hematoma in 3 patients. One patient required laparotomy, for rectal injury required colostomy. **Conclusion:** Vaginal hysterectomy is safe and acceptable with significant benefits for the patients. Vaginal hysterectomy can be carried out on most women who traditionally would undergo abdominal hysterectomy, as supported by good evidences. **Key Words:** vaginal hysterectomy, non prolapsed uterus, non-descent vaginal hysterectomy

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INTRODUCTION

Hysterectomy is one of the most common major gynaecological operative procedures performed worldwide. It can be performed by abdominal, vaginal or laparoscopic route. There is a great deal of regional variations in methods used to perform hysterectomies¹. There is still a great debate between gynaecologists about the relative advantages and disadvantages of the different methods of performing a hysterectomy. Although the first scheduled hysterectomy performed was actually a vaginal hysterectomy, but this was rapidly followed by the

abdominal hysterectomy and this became the majority method². Vaginal hysterectomy is considered as signature mark of gynaecologist. The vaginal hysterectomy remains the most minimally invasive technique, with the advantage of quickest recovery, lowest complications, and best cosmesis. Though introduction of laparoscopic route had changed interest in vaginal hysterectomy. Laparoscopic surgery was associated with a higher intraoperative complication rate than either abdominal or vaginal hysterectomy. Vaginal hysterectomies had a lower short-term complication rate than abdominal hysterectomies and fast recovery. Importantly, vaginal hysterectomy was found to be safer and quicker to perform than laparoscopic hysterectomy³. It also noted that laparoscopic hysterectomy took longer to perform than abdominal hysterectomy⁴. With appropriate patient selection, vaginal hysterectomy can be performed most of benign indication. The most common indication for a vaginal hysterectomy is uterine prolapse⁵. There are contraindications to a vaginal hysterectomy which include cervical cancer, endometrial hyperplasia, or malignancy large ovarian mass and large cervical leiomyoma. Severe pelvic adhesions, obliterated cul-de-

sac, and very large uterine size are all relative contraindications. Obesity, previous caesarian deliveries are not considered as contraindications. Present study was aimed to study vaginal hysterectomy at our tertiary care center.

MATERIAL AND METHODS

Present study was conducted in department of obstetrics and gynaecology, Bharati Hospital and Medical College, Sangli during period from August 2016 to August 2017. Study was of observational and prospective type and necessary approval was taken from ethical committee.

Inclusion criteria:

Patients with benign gynecological disorders, size less than 16 weeks pregnant uterus, adequate vaginal access and good uterine mobility.

Exclusion criteria:

Patients with restricted uterine mobility, suspected malignancy, complex adnexal masses, size more than 16 weeks pregnant uterus, not willing to participate. After decision of vaginal hysterectomy, procedure was explained to patients, necessary written informed consent for surgery and participation of study was taken from patients. Pre-operative investigations as complete hemogram, urine analysis, blood sugar, serum creatinine, blood urea, Pap smear, ECG, chest X-ray, USG abdomen and pelvis and relevant other investigations were done.

Re-evaluation was done in operation theatre. Cases were operated under regional anesthesia. All patients received prophylactic antibiotics as per hospital protocol. Operative records were collected, patients monitored in post-operative period. Post-operative catheterization with Foley’s catheter was done in all cases and kept for 24 hours to 3 days. Complications were noted duly and uncomplicated patients were discharged on day 3 to 5, depending on other factors. Post operatively haemoglobin estimation was done. Follow up was kept for 3 months. Collected data was entered in Microsoft excel and statistical analysis was done using descriptive statistics.

RESULTS

After applying inclusion and exclusion criteria, 164 patients were included in present study. During study period total 346 gynaecological hysterectomies were done in our hospital. Total 45.05 % patients had vaginal hysterectomy. Route of hysterectomy was decided on basis of multiple factors such as indication, size of uterus, mobility, previous pelvic or abdominal surgeries, vaginal laxity, choice of patient, etc. Most common age group in our study was 51-60 years (35.97 %), followed by 51-60 years (35.97 %). Patients less than 50 years age were 22.56 %, most of those were having uterine prolapse. 58.55 % patients were postmenopausal and 28.66 % were perimenopausal.

Table 1: Patient characteristics

Characteristic	Number of Cases	Percentage
Age distribution (years)		
less than 40	3	1.83
41-50	34	20.73
51-60	59	35.97
61-70	49	29.88
more than 70	19	11.59
Menstrual status		
reproductive age group	21	12.80
Perimenopausal	47	28.66
postmenopausal	96	58.55

Most common indication for hysterectomy was uterine prolapse with cysto-rectocele in 86 patients, followed by adenomyosis in 23 patients and dysfunctional uterine bleeding in 21 patients. Other indications were endometrial polyp (12 patients), cervical polyp (8 patients), fibroid (7 patients), cervical intraepithelial neoplasia (4 patients), postmenopausal bleeding (13 patients).

Table-2: Indications For Performing NDVH And vaginal hysterectomy

Surgical indication	No. of cases	Percentage
Uterine Prolapse	86	52.44
Adenomyosis	23	14.02
Dysfunctional uterine bleeding	21	12.8
Endometrial polyp	12	7.32
Cervical polyp	8	4.88
Fibroid	7	4.29
Cervical intraepithelial neoplasia	4	2.43
Postmenopausal bleeding	3	1.82
Total number of cases	164	100

Vaginal laxity considered as a favourable factor for vaginal hysterectomy. Increasing parity increases vaginal laxity, as well as incidence of uterine prolapse. In our study parity 3 or more patients were 52.44 %, while only 8.54 % patients were primipara. 39.03 % patients were with parity 2. While considering parity, incidence of caesarean delivery is also important. In our study total 19 patients had previous caesarean delivery. 16 patients had 1 previous caesarean delivery, while rest 3 had previous 2 caesarean delivery.

Table 3: Parity status

Parity	Number of patients	Percentage
1	14	8.54
2	64	39.03
3	47	28.65
4 or more	39	23.79

Uterine size is also a major factor in successful vaginal hysterectomy. Most of our patients had uterine size upto 6 weeks (63.41 %), only 7 patients were had uterine size 12-16 weeks.

Table 4: Size Of Uterus

Size of uterus	Number of patients	Percentage
Upto 6weeks	104	63.4146341
6- 8weeks	35	21.3414634
8 -12 weeks	18	10.9756098
12- 16 weeks	7	4.26829268

Few complications were noted in post-operative period. Post-operative blood transfusion was given to 7 patients. Common complication was vault hematoma in 3 patients. One patient required laparotomy, for rectal injury required colostomy. Patient had dysfunctional uterine bleeding and pelvic inflammatory disease. Other 2 patients had ovarian vessel bleeding was secured vaginally. Other complications were bladder injury (2 patients), secondary haemorrhage (1 patient), managed by vaginal route.

Table 5: Surgical Complications

Complications	Number of patients	Percentage
Vault haematoma	3	1.83
Ovarian vessel bleeding	2	1.21
bladder injury	2	1.23
laparotomy	1	0.61
rectal injury	1	0.61
Secondary haemorrhage	1	0.61

DISCUSSION

Vaginal hysterectomy is continuously evolving, with addition of new technique, instruments. In cases other than uterine prolapse size of the uterus, previous vaginal deliveries, previous pelvic surgery or caesarean section, pelvic adhesions, etc are limiting factors for vaginal hysterectomy. While multiparity, lax tissues following multiple deliveries and decreased tissue tensile strength provide comfort to vaginal surgeon even in the presence of uterine enlargement. Vaginal hysterectomy is a natural orifice surgery, with minimal complications, no cosmetic discomfort, early recovery and best physiological repair in prolapse patients. Both the American Congress of Obstetricians and Gynecologists⁶, American Association of Gynaecologic Laparoscopists⁷ recommend vaginal hysterectomy as the preferred route of hysterectomy for benign indications. Recent Cochrane meta-analysis⁸ demonstrated that for women undergoing hysterectomy for benign disease, vaginal hysterectomy appears to be superior to both abdominal and laparoscopic

hysterectomy and is associated with faster return to normal activities. But a decline is noted in the percentage of hysterectomies performed vaginally in the United States, from 24.8% in 1998 to 16.9% in 2012⁹. Total 164 patients were included in present study. In our institute during study period 45.05 % patients had vaginal hysterectomy. Patients with uterine prolapse, experienced faculty, teaching institute, interest in vaginal surgeries were main causes for this high number of vaginal hysterectomies in our institute. Various studies noted that vaginal hysterectomy may be appropriate in patients with uterine size >12 weeks without an increased rate of complications^{10,11}. While Sahin¹² noted a significantly longer mean operating time and a higher rate of haemorrhage is noted in women with uterus more than 12 weeks. Increased operating time and risk of haemorrhage was also noted in our study with increasing uterine size due to difficulty in access, more vascularity. Large uterine size which is often considered a contraindication to vaginal hysterectomy can be overcome by techniques

like coring, bisection, myomectomy or a combination of these after ligation of the uterine artery^{13,14}. Apart from uterine prolapse (86 patients), other indications in non-prolapsed uterus were adenomyosis (23 patients), DUB (21 patients), endometrial polyp (12 patients), cervical polyp (8 patients), fibroid (7 patients), cervical intraepithelial neoplasia (4 patients), postmenopausal bleeding (3 patients). Similar results were noted in other studies¹⁵. During study period we noted complications in 5.48 % patients. Makinen *et al* in their 10 years study noted complications in Vaginal hysterectomy in 5.2% of women and common complications were cuff cellulitis and abscess and incidental cystotomy.¹⁶ Various studies reported surgical site infections or deep/organ space surgical site infection as 0.6%-1.0%. We did not notice any infections in our study^{17,18}. We had 1.23 % patients with bladder injury and no ureteric injury. Reported bladder and ureteric injury rate are 5.1 per 1000 women and 0.4 per 1000 women, respectively.¹⁹ We had 1 patient (0.61 %) with bowel injury. The rate of bowel injury during vaginal hysterectomy ranges from 0.1% to 1.0%⁵. No mortality was noted during study period.

CONCLUSION

Vaginal hysterectomy is safe and acceptable with significant benefits for the patients. Vaginal hysterectomy can be carried out on most women who traditionally would undergo abdominal hysterectomy, as supported by good evidences. Training in the surgical techniques of vaginal hysterectomy can promote number of surgeries and reduce complications.

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