Research Article

Nondescent vaginal hysterectomy, a changing practice in Indian scenario for scar less surgery

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Abstract

Introduction: Hysterectomy is the most common operation performed next only to caesarean operation by gynaecologist. This decade has seen resurgence of hysterectomy by vaginal route for indication other than prolapse, may be due to better compliance by the patients. **Aims and objective:** This prospective observational study was conducted to assess safety, morbidity, and feasibility of nondescent vaginal hysterectomy. **Method:** All patients who fulfilled the criteria for the study were included in the study. NDVH was performed in the cases with adequate vaginal access, good uterine mobility and uterine size not exceeding 18 weeks. Different morcellation techniques were employed for bigger size uterus. **Result:** Total 50 patients underwent nondescent vaginal hysterectomy. 28 out of 50 patients were in 40 -49 years of age group. 98% of them were multiparous. Dysfunctional uterine bleeding (44%) was the most common indication followed by Pelvic inflammatory disease (26%). Morcellation techniques were employed in 33 cases (66%). Mean operating time was 79.6 minutes with average blood loss 110 ml and average duration of pain disappearance was on 4th day and hospital stay 6 days. Complications were minimal. **Conclusion:** Vaginal hysterectomy in non descended uterus is feasible, safe, associated with less morbidity and better compliance by patients.

Key Words: Nondescent Vaginal Hysterectomy, Morccellation, Vaginal hysterectomy

Introduction

Hysterectomy is the most common gynaecological procedure performed, next only to caesarean section. Uterus can be removed either vaginally, abdominally or laproscopicaly. Controversy on route of hysterectomy started years back when it was first performed by Langenbeck in 1813 [1]. Superiority of vaginal hysterectomy is well accepted but still majority of the gynaecologist prefer abdominal route for indications other than prolapse uterus. The article written by Sheth et al [2] on technique and advantage of vaginal hysterectomy sparked the resurgence of vaginal hysterectomy for nondescent uterus.

As we know that abdominal exploration is associated with risks like paralytic ileus, incisional hernia, infection etc which are significantly less with vaginal route [3], though usual limitation of vaginal hysterectomy in non descended uterus is size, but with newer morcellation technique (e.g: wedge resection, bisection , myomectomy, coring) hysterectomy can be facilitated even in larger sized uterus [4]. In recent years larger numbers of hysterectomies are being performed by this route due to growing expertise of gynaecologist and better compliance reported by patients.

Major advantage of vaginal route is of being scar less procedure [3] which is always preferred by cosmetic minded advanced women and is cost effective.

Aims and Objective

The present study explores to find that vaginal hysterectomy involves less morbidity, is less invasive, reduces recovery time, decreases hospital stay and reduces overall medical cost.

Materials and Methods

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This prospective study conducted at L N Medical college and hospital from 1st January 2015 to 31st October 2015 in Obstetrics & gynaecology department. Total number of hysterectomies done during the period was 602 among them 50 underwent nondescent vaginal hysterectomy.

All patients requiring hysterectomy for benign condition without prolapse and who gave consent for vaginal hysterectomy were included in the study.

Inclusion criteria-
1. Uterine size not exceeding 18 weeks.
2. DUB
3. Multiparity with good vaginal access
4. Good mobility

Exclusion criteria-
1. Uterine size exceeding 18 weeks gestational size by clinical assessment
2. Inflammatory condition leading to adhesion
3. Adenexal mass
4. Malignancy
5. Restricted mobility

Patient not fulfilling the prerequisite for vaginal hysterectomy underwent abdominal hysterectomy. Detailed history and physical examination were conducted in all the cases. Pre-operative blood and urine examination (blood group, CBC, urine r/m, KFT, LFT, BT,CT, HIV, HBsAg, CXR, & ECG) done. Preanaesthetic checkups were done before putting up the case to rule out co morbid illnesses. Informed written consent obtained from patient's guardian in each case.

All cases were reassessed under anaesthesia in OT for mobility, vaginal accessibility and laxity of pelvic muscles.

Operative technique: All cases were done under regional anaesthesia (spinal). After parts preparations, cervix held with volsellum, circular incision given over pubo-vesico-cervical fascia, bladder pushed up, anterior pouch & pouch of douglas opened. Cardinal & uterosacral ligaments clamped, cut and ligated. Uterine vessels clamped, cut and ligated on both side. Next in bigger sized uterus, various debulking procedure (bisection, coring, morcellation & myomectomy (Fig 1) was performed as and when required. In cases of total hysterectomy, next clamp applied over ovarian lig, tube and round lig, cut and ligated on both side. For salpingp-ophorectomy next clamp applied over round ligament which was cut and ligated followed by clamping of infundibulopelvic ligament which was cut and ligated. After delivery of uterus vault closed with continuous locking suture, vaginal packing done. Foley's catheterization done in all cases for first 24 hours.

All patients were given intravenous antibiotics for first 48 hours postoperatively. Data regarding age, parity, uterine size, debulking procedures, average blood loss intraoperatively, duration of operation, post-operative complication and length of hospital stay were recorded. Blood loss was calculated by weighing the cotton swab before and after the surgery. 24x 24 cm sized swabs were used in all surgery. On an average ¼ soaked swab contained 20ml blood, ½ soaked contained 40 ml and fully soaked 80 ml. Operating time was calculated from the beginning of the incision at cervicovaginal junction to the placement of small vaginal pack at the end of operation.

Fig 1: Specimen showing picture of post hysterectomy uterus with multiple fibroids (11) removed transvaginally during NDVH.

Result

Table 1: Age wise distribution of cases

Age group (in years)	Number of patients
30-39	6
40-49	28
50-59	13
>60	3

Most common age group undergoing hysterectomy was 40 – 49 years. Second common age group 50 – 59 years and only 3 patients were of ≥ 60 years.

Table 2: Parity wise distribution of cases

Parity	Number
Nullipara	1
Para 2	6
Para 3	19
Para 4	16
>Para 4	8

98% patients were multiparous. Only one patient was nulligravida .

Table 3: Showing indication of surgery

Indication	Number
PID with chronic cervicitis	10
DUB	22
Fibroid uterus	9
Adenomyosis	5
Cervical polyp	3
Postmenopausal bleeding	1

Most common indication in our series was DUB (22/50) followed by PID and fibroid. Five patients were operated for adenomyosis and 3 for cervical polyp. One patient had benign ovarian cyst (5×6 cm) which was successfully removed vaginally. This indicates adenexal pathology can be dealt by vaginal route.

Table 4: Surgical procedure performed on uterus

Uterine size	Surgical procedure	Number of patients
Normal to 6 weeks	Removal of intact uterus	17
6 to 10 weeks	Bisection	22
10 to 14 weeks	Wedge resection	8
14 to 18 weeks	Enucleation with bisection	3

Bisection was most common debulking procedure resorted to followed by wedge resection.

Table 5: Surgical result

Mean operating time	79.6 min (45-120 min)
Mean blood loss	110 ml (100-250 ml)
Average hospital stay	6 days (4- 11 days)
Day of disappearance of pain	4th day (3-7 days)

Mean operating time was 79.6 min with average of 45-120 min. Average blood loss was 100- 250 ml. Most of the women discharged in 6 days (as most of them were from rural area). Day of disappearance of pain was 3rd day as estimated by decreased requirement of analgesic.

Table 6: Postoperative complication

Fever	1 (2%)
UTI	2 (4%)
Leg pain	1 (2%)
Vault sepsis	1 (2%)

Only one patient had fever on 3rd postoperative day. 2 patients developed UTI and one patient complained of leg pain. Only one patient got readmitted for vault sepsis on 15th post op day.

Discussion

Most of the hysterectomies are performed by abdominal route and vaginal route is usually reserved for uterocervical descent. The reason behind it is inadequate skill, uterine enlargement, adhesions and need for salpingo-ophorectomy.

This prospective study was performed over a period of 1 year at tertiary care teaching hospital. Out of all major gynaecological surgery, hysterectomy consisted of 60-70%. In this study most common age group underwent hysterectomy was 40-49 years (28/50). Pelvic factors play an important role in the form of parous tissue, tissue laxity, roomy vagina and availability of uterus free pelvic space for operative manoeuvre ability which result in visible descent making access favourable and reducing the need for debulking. Favourable pelvic factor affect the overall outcome. 98% of patients in this series were multiparous with one being nulligravida, but we did not encounter any difficulty during her hysterectomy due to favourable pelvic factors. Previous pelvic surgery is not a contraindication [5,6] for vaginal hysterectomy , we too did not encounter any difficulty during the surgery, only careful bladder dissection is needed in these cases. Most common indication of hysterectomy in this series was DUB (44%) followed by PID (26%). Hysterectomy by vaginal route for nondescent uterus is feasible even in cases of enlarged uterus. In most of the cases tubes and ovaries are accessible by vaginal route. 8 patients in our series underwent bilateral salpingo oophorectomy along with hysterectomy, and in one patient we were able to remove simple ovarian cyst of 6x7 cm size in toto. Main support of uterus, the uterosacral and cardinal ligament situated in close proximity of uterus, once clamped and cut produce first degree descent. After ligation of uterine vessel, various technique of debulking can be used to reduce the size of uterus to facilitate further steps of hysterectomy and deliver out the uterus. We were successful in removing uterus upto 18 weeks size without any increase in surgical complication. Similar findings were reported by Mazdisnian et al[4] and Unger et al [7]. Das and seth [8] also removed uterus up to 20 weeks size by vaginal route. Magos et al[9] have concluded that the uterus equivalent to 20 weeks size should not be considered a contraindication to vaginal hysterectomy. In our study Bisection was done in 22 (44%), myomectomy in 3(6%) and wedge resection in 8(16%). Davies et al [10] also resorted to these techniques and emphasized its relevance to ease the difficulty to take out big size uterus. Average blood loss in this study was 110 ml, which is well correlated with the study conducted by Rathindra nath Ray [11] which showed mean blood loss of 127.64ml. Average operating time was 79.6 minutes in our series which is comparable to Adam Magos et al[9] and Kovac et al[12] studies which showed 84.3 and 94 minutes respectively. Operating time and blood loss can be reduced by increasing experience and improving skill. In our series average duration of stay was 6 days which is slightly more than the findings of other studies like Tariq Miskry and A. Magos [3] there it was 3.6 days. As most of the patients in our series were from rural area, they stayed longer without any surgical need. Overall postoperative complications were less and of minor grade. Postoperative pain was less and day of pain disappearance was 3rd day as evidenced by decreased requirement of analgesic, this is due to less peritoneal handling, and absence of abdominal scar.

Advantage of NDVH are scarless surgery, decreased blood loss, minimal peritoneal handling resulting in less incidence of adhesion formation and paralytic ileus, decreased duration of surgery resulting in less anaesthetic exposure with decreased morbidity, fast

recovery and less duration of hospital stay. Since it is a scarless surgery there is no chance of wound dehiscence and development of hernia in later years of life. In high risk patients NDVH is procedure of choice.

Conclusion

Vaginal route for nondescent uterus upto 18 weeks size is feasible, safe and associated with low cost. It gives natural route, smoother and safer operative corridor to surgeon and scar less surgery to the patients. So it is time for gynaecologist to paradigm shift in technique for vaginal route to remove non descended uterus and this scar less approach should be chosen as a preferred method of hysterectomy.

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