A PROSPECTIVE STUDY OF NON-DESCENT VAGINAL HYSTERECTOMY

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ABSTRACT

BACKGROUND

The aim of the study is to assess the outcome in terms of safety, complication and feasibility of non-descent vaginal hysterectomy for benign gynaecological disease.

MATERIALS AND METHODS

A prospective study to assess feasibility, safety and significant complications in non-descent vaginal hysterectomy was conducted at the Department of Obstetrics and Gynaecology of DM-WIMS from January 2016 to December 2016. Non-descent vaginal hysterectomy was done for selected cases with benign pathology in the absence of prolapse. Vaginal hysterectomy was done by consultants to obtain comparable data. Hysterectomy was accomplished in usual manner using debulking methods like bisection, myomectomy and decoring techniques.

RESULTS

A total of 40 cases were selected for non-descent vaginal hysterectomy. Among them, 39 cases (97.5%) underwent successful NDVH. Majority of patients (67.5%) fell in the 40-50 years age group. The major indication (57.5%) was fibroid uterus. There were 45% cases <12 weeks and 45% between 12-14 weeks in size. Intraoperative and postoperative complications were minimal with only one bladder injury. 22.5% needed perioperative blood transfusion mainly as a corrective measure for pre-existing anaemia. Mean duration of surgery was 72 minutes. Mean day of discharge was 4 days.

CONCLUSION

Vaginal hysterectomy is safe and feasible in most of the women requiring hysterectomy for benign conditions with less complications and shorter hospital stay.

KEYWORDS

Non-Descent Vaginal Hysterectomy, Debulking Techniques, Size of Uterus, Intraoperative and Postoperative Complications.

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BACKGROUND

Hysterectomy is the most performed major surgery in women. It can be done abdominally, vaginally or laparoscopically. The route of surgery should be determined by the physician after assessing the medical needs of the patient.[1] Abdominal hysterectomy is undoubtedly the most popular with a 70:30 ratio for abdominal versus vaginal route.[1,2] Abdominal hysterectomy is more commonly done even for cases that can be done vaginally despite well-documented evidence that vaginal hysterectomy has distinct health and economic benefits in terms of fewer complications, better postoperative quality-of-life outcomes and reduced hospital charges.[2,3,4] The latest value study concluded that duration of surgery and major surgical complications in terms of blood loss, visceral injury and anaesthetic complications were more in LAVH.[5,6] Lack of training and experience seem to be the most important limiting factors in vaginal surgery. Determining whether the pathology is confined to or extends beyond the confines of the uterus is critical to selecting the most appropriate route of hysterectomy. The presence of severe endometriosis, adnexal pathology, adhesions because of previous pelvic surgeries contraindicate vaginal hysterectomy.

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MATERIALS AND METHODS

The study was conducted in Department of OBG DM-WIMS, Wayanad, from January 2016 to December 2016. A total of 40 patients were selected for the study.

Inclusion Criteria

1. Cases needing hysterectomy for benign conditions.
2. Uterine size ≤16 weeks.
3. Parous women.

Exclusion Criteria

1. Suspected adnexal pathology.
2. Endometriosis.
3. Immobile uterus.
4. Uterus size more than 16 weeks.
5. Genital malignancy.
6. Cases needing oophorectomy.

The patients were taken based on the inclusion and exclusion criteria as mentioned above. The procedure was explained to the patients and consent for the surgery obtained. Consent for conversion to abdominal route was also taken. Preoperative and preanaesthetic checkup was done for all patients. All patients were subjected to ultrasound of abdomen and pelvis and Pap smear before the surgery. Endometrial biopsy was done in indicated cases. The surgery was done under regional or general anaesthesia. The mobility of the cases was reassessed again once patient was under anaesthesia. Non-descent vaginal hysterectomy was done in the usual manner after creating the vesicocervical and vesicovaginal spaces. Debulking procedures like bisection, myomectomy, morcellation and decoring were done after securing the uterine vessels. Hysterectomy was completed in the usual manner. Suspected cases of bladder injury were subjected to methylene blue dye test where the dye was inserted through the urethra and its leakage looked into. Vault angles were secured and vault closed. A small 0.5 cm gap was left in the vault through which a corrugated rubber drain was inserted with one end in the vagina. This was done to identify any significant bleeders in the immediate postop period. This drain was retained for 24 hours and was removed by gentle traction on the vaginal end after 24 hours. Bladder was catheterised with Foley's catheter size 14-F for 24 hours post-surgery. Vagina was packed with Betadine-soaked ribbon gauze. Vaginal hysterectomy was considered successful if it was not converted to the abdominal route. Operating time was calculated from the start of incision at cervicovaginal junction to the placement of vaginal pack. All the women received prophylactic antibiotic as per hospital protocol. All patients also received thromboprophylaxis. Postoperatively, haemoglobin and haematocrit estimation was done and all patients were followed up. Postoperative complications like fever, urinary tract infection, vaginal cuff cellulitis, vaginal bleeding, low back pain and leg pain was noted. Discharge from hospital was planned after completing 72 hours postoperative in the hospital. All patients were followed from time of admission to time of discharge and 2 weeks thereafter. Data regarding age, parity, uterine size, indication for hysterectomy, length of operation, complications and hospital stay were recorded and analysed.

RESULTS

Among 40 patients included in the study, 39 patients successfully underwent non-descent vaginal hysterectomy, whereas one case had to be converted to abdominal route.

Age in Years	Numbers
30-40	5
40-50	27
50-60	7
>60	1

Table 1. Age Group

Indications	Numbers
Leiomyoma	23
Adenomyosis	11
Postmenopausal bleeding	5
Adenomyosis with CIN 2	1

Table 2. Indication for Hysterectomy

Size in Weeks of Gravid Uterus	Numbers
<12 weeks	18
12-14 weeks	18
14-16 weeks	4

Table 3. Size of Uterus

Complications	Numbers
Perioperative blood transfusion	9
Low back pain with leg pain	6
Vault cellulitis	3
Urinary tract infection	2
Bladder injury	1

Table 4. Complications

Days	Numbers
<3	1
3-5	30
>5	9

Table 5. Day of Discharge

Majority of patients (27/40), i.e. 67.5% needing non-descent vaginal hysterectomy came in the 40-50 years age group. The major indication was symptomatic leiomyoma (23/40), i.e. 47.5% with mainly abnormal uterine bleeding. It was followed by adenomyosis also with abnormal uterine bleeding. Since, the majority of the patients had some form or the other of abnormal uterine bleeding, preoperative anaemia was present in 16 patients. Corrective measures were taken before surgery and in 9 patients despite medical management of anaemia had to give perioperative blood transfusion. In 36 patients (90%), size of uterus was <14 wks. Hysterectomy was completed using debulking techniques mainly bisection after ligation of the uterine arteries. One case had to be converted to abdominal surgery. This was a case of previous two caesarean sections. Bladder was inadvertently injured and had to be corrected abdominally after calling in the urologist. 39 cases (97.5%) were successfully completed vaginally. The average operating time was 72 minutes. Postoperative complications were mild except for the case with bladder injury. Of the complications, two patients had urinary tract infection. Six patients had low back pain with pain lower legs for 24 - 48 hours after surgery. The reason might be the lithotomy position adopted for surgery. Three patients had vault cellulitis within two weeks of surgery, which was managed by giving a repeat course of antibiotics and medicated vaginal tablets. Majority of patients were discharged within 3-5 days of surgery.

DISCUSSION

In the absence of uterine prolapse, most gynaecologists prefer the abdominal to the vaginal route of hysterectomy. The common limitations for vaginal hysterectomy in nonprolapsed uterus include size of the uterus, nulliparity, previous pelvic surgery or Lower Segment Caesarean Section (LSCS), pelvic adhesions and endometriosis.[7] The factors that may influence the route of hysterectomy for any surgical indication include uterine size, mobility, accessibility and pathology confined to the uterus (no adnexal pathology or known or suspected adhesions).[8] In the present study, out of 40 cases selected for non-descent vaginal hysterectomy, 39 cases were completed successfully, whereas one case was converted to abdominal hysterectomy. The case that had to be converted abdominally was a case of previous two caesarean section with bladder adhesions over the fibroid situated on the lower segment of the uterus. Bladder was injured while creating the vesicocervical space and repair had to be done abdominally. Also, difficulty was noted in the cases in which uterine size was more than 12 weeks especially in cases with a fibroid in the upper part of the body and fundus. Majority of the patients were in the age group of 40-50 years. Similar age prevalence was noted in other case series reviews.[9-12] Similarly, all the patients were parous comparable to other studies.[9-11] As the number of vaginal deliveries increased, the ease of performing non-descent vaginal hysterectomy also increased despite enlarged uterus due to laxity of tissues and decreased tensile strength. In uterus with less mobility or in cases with relatively narrow vagina, it was seen that bisection of the uterus eased the surgical procedure. If the vagina will allow access to divide the uterosacral and cardinal ligaments, uterine mobility usually is improved enough to allow vaginal hysterectomy in these cases.[13] Previous pelvic surgeries, suspected adnexal pathology and severe endometriosis were contraindications for vaginal hysterectomy.[14] The commonest indication was fibroid uterus (57.5%). Fibroid uterus was the commonest indication in other case series.[9,10,12] In our study, 18 cases had uterine size more than 12 weeks, which was similar to Bandra et al.[11] Similar findings were reported by Unger[15] who operated upon uteri weighing 200 to 700 gms without any increase in complications as compared to abdominal hysterectomies. Nine patients (22.5%) required blood transfusion. Majority of these patients already had pre-existing anaemia due to long-standing abnormal uterine bleeding. Mean duration of surgery was 72 minutes as compared Dewan et al (54.5 minutes),[9] Bharatnur et al (65 minutes)[10] and Bhadra B et al (55 minutes).[11] The operative time was dependent on size of uterus and experience of surgeon. There was one case of bladder injury (2.5%). Bladder injury during vaginal hysterectomy has been variously reported between 0.5 to 1.6%. Unger reported an incidence of 2.8% in the previous caesarean section group vs. 1.6% in those without caesarean section. Sheth[16] reported a very low incidence of bladder injury 7/5655 (0.1%). Postoperatively, complications were minimal, which included postoperative pain, fever and UTI. Mean hospital stay was four days.

CONCLUSION

Though vaginal hysterectomy is still mainly used for hysterectomy in prolapsed uterus, it's safety and patient comfort in cases of non-descent of uterus has been proven beyond doubt. The technique used for hysterectomy should be dictated by the indication for the surgery, patient characteristics and patient preference and experience of the surgeon. Therefore, vaginal hysterectomy with the various morcellation techniques should be practiced more often in clinical practice and workshops organised for residents and postgraduate students to increase their practical skills.

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