A Cross Sectional Descriptive Study on Non Descent Vaginal Hysterectomy (NDVH)

Abstract

Aims and objectives: The objective of this study was to determine the less post operative morbidities and better compliance of the patient following vaginal hysterectomy in case of non descent uterus. 

Materials and Methods: This is a cross sectional descriptive study of patients admitted in Chittagong medical college Hospital and different private clinics between May 2010 and April 2013. Total 126 patients requiring hysterectomy recruited for the study. Indications of Non-descent vaginal hysterectomy (NDVH) were dysfunctional uterine bleeding (DUB), fibroid uterus, adenomyosis, chronic cervicitis, CIN- II and III, endomertrial hyperplasia, PID and invasive mole. NDVH were performed in cases with mobile uterus, size not exceeding 14 weeks of gestation, and with adequate vaginal access. Morcellation techniques like bisection, myomectomy, wedge debulking or combinatoin of these were employed in bigger and firmer uteri. 

Results: Age ranged from 35 -60 years with majority (68.25%) between 45 and 50 years and 8.70% above 50 years. Seventy nine (62.698%) women were of 3 or more parity, 38 cases (30.15%) had two and 9 cases (7.14%) had one. Preoperative uterine size varied from eight weeks size 98 (77.77%), 12 weeks size 21cases (16.66%) and more than 12 weeks size7 cases (5.55%). Table 1 depicts the indications for NDVH. One hundred nineteen patients had hysterectomy and remaining 7 had hysterectomy with salpingo-oophorectomy. Eighty four (66.66%) operations were complete within 90 minutes and remainder needed 90 minutes to 3 hours. Average blood loss was up to 200 ml in 91 (72.20%) cases and in other cases it was more than 200 ml. Average hospital stay was 2 days in the majority (76.20%) while 3-5 days in others. Bladder injury occurred in 6 cases (4.76%) and rectum injury in 1case (0.79%) during operation. Postoperatively 12 (9.52%) patient were suffering from secondary haemorrhage and 15 (11.11%) patient from vault granuloma. Analgesic requirement was at minimum during post operative period. Cost was reduced with the compared to the other route of hysterectomy. 

Conclusion: NDVH is a less invasive technique with benefits,which includes shorter hospital stay and faster convalescence and avoid abdominal wound complications. It should be a primary methods for removal of large uterus provided one is familiar with morcellation technique.

Key words: Non descent vaginal hysterectomy; abdominal hysterectomy; morcellation.

INTRODUCTION

Hysterectomy is the most common major gynecological surgical procedure. It can be done by abdominal or vaginal route and with the help of laparoscopy. Laparoscopic assisted vaginal hysterectomy (LAVH) and total laparoscopic hysterectomy (TLH) although gaining more popularity now a days, though it is associated with higher cost, longer duration of operation, and need general anaesthesia. On the other hand vaginal hysterectomy is associated with reduced morbidity and lower health care cost compared to laparoscopic technique. It is exclusively done under spinal anaesthesia and also preferred in high risk cases like obesity and it is also a cosmetic surgery (scarless operation).
Hysterectomy is commonly indicated for uterine leiomyoma, dysfunctional uterine bleeding, adenomyosis, endometriosis, utero vaginal prolapse, premalignant and malignant condition. From many large scale surveys of hysterectomy's practice, it has been shown that 70-80% of hysterectomies are performed by the abdominal approach. In the management of uterovaginal prolapse, the vaginal route is normally used but this indication accounts for only approximately 10% of the cases. With the recent advances and innovation of surgery, it led to surgeons in learning vaginal hysterectomy irrespective of non-descent uterus. One of the most dramatic changes in the route of removal of uterus during the past few years is switching over from abdominal to vaginal route. Today gynecologists are becoming vaginal surgeons. They have started to believe that every uterus can be and should be removed vaginally unless the route is contraindicated. Vaginal hysterectomy in larger sized uterus is facilitated by bisection, myomectomy, debulking, coring and clampless approach. Vaginal hysterectomy has been found to be associated with less febrile morbidity, less bleeding necessitating transfusion, shorter hospitalization and faster convalescence than abdominal hysterectomy. There is evidence for lower morbidity and a quick recovery in patients undergoing vaginal compared with abdominal hysterectomy.

Now the question is arises why relatively few hysterectomies are performed vaginally still today. Because training and experience in vaginal surgery appear to be the major determinants of the type of hysterectomy performed. The aim of this study is to determine the short-term morbidity for vaginal hysterectomy done for non-descent uterus. Another aim of this present study is to report the personal experience in performing non-descent vaginal hysterectomy (NDVH) for benign gynaecological indications and to explore different surgical techniques that make vaginal hysterectomy simpler and easier to perform.

**MATERIALS & METHODS**

This is a cross sectional descriptive study carried out in Chittagong Medical College Hospital and different private clinics of Chittagong from May 2010 to April 2013. One hundred and twenty six women scheduled for hysterectomy for benign conditions of uterus were included. Data analysis was carried out by mean median percentage and relative risk of NDVH with 95% confidence intervals (p <0.05).

**Inclusion criteria**

Fibroid uterus, DUB, adenomyosis, endometrial hyperplasia, CIN-II and III, chronic cervicitis, PID, postmenopausal bleeding and invasive mole with previous history of one caesarean section, without any descent of uterus.

**Exclusion criteria:**

- Malignant condition of uterus and cervix, benign condition of the pelvic organ with previous history of two or more caesarean section and suspected dense adhesion and utero vaginal prolapsed.
- A preformed questionnaire was made for data collection. Detailed history and thorough clinical examination was done in each case. A written informed consent was taken from each patient. Particular attention was given to operative time, per and post-operative complications, amount of blood loss and hospital stay.

All cases were re-assessed in operation theatre after patient was anaesthetized to see the size, mobility of the uterus, vaginal accessibility and laxity of the pelvic muscles. All the principles of vaginal hysterectomy in non-descent uterus were followed and appropriate instruments were also used.

All cases were done under spinal anaesthesia. Extended lithotomy position with legs apart provided good spaces for assistants to stand and assist without discomfort. Labial stitches made the surgical field wide for better visualization. Urinary bladder was emptied to find out the vesicouterine space clearly. The mobility of the uterus and surrounding structures was checked by holding the cervix with volsellum forceps moving the uterus in all directions. The steps of operation are depicted in figures 1 to 6.
RESULTS
Age ranged from 35-60 years with majority (68.25%) between 45 and 50 years and 8.70% above 50 years. Seventy nine (62.698%) women were of 3 or more parity, 38 cases (30.15%) had two and 9 cases (7.14%) had one. Preoperative uterine size varied from eight weeks size 98 (77.77%), 12 weeks size 21 cases (16.66%) and more than 12 weeks sized cases (5.55%). Table 1 depicts the indications for NDVH. One hundred nineteen patients had hysterectomy and remaining 7 had hysterectomy with salpingo-oophorectomy. Eighty four (66.66%) operations were complete within 90 minutes and had hysterectomy with salpingo-oophorectomy. Eighty four hundred nineteen patients had hysterectomy and remaining 7 (5.55%). Table 1 depicts the indications for NDVH. One was up to 200 ml in 91 (72.20%) cases and in other cases it was more than 200 ml. Average hospital stay was 2 days in the majority of post operative period. Cost was reduced in comparison to the other route of hysterectomy.

The indications for hysterectomy in this study are more or less similar with the indications for non-descent vaginal hysterectomy reported by others15. In our study the contraindications are previous history of two caesarean section, severe degree of endometriosis, nulliparous women because vaginal approach was not possible though four cases with pelvic inflammatory diseases was selected for NDVH and successfully done without any difficulties. In case of postmenopausal women proper evaluation was done very carefully, every case was evaluated with diagnostic D&C to exclude malignancy. In case of endometrial carcinoma preferred surgery is radical hysterectomy rather than NDVH14. Though in this route bilateral salpingo-oophorectomy easily possible after doing NDVH but lymph node clearance is not possible16. Adam Magos et al selected woman with fibroid uterus between 14-20 weeks of gestational size for bisection, myomectomy, morcellation and coring to reduce the uterine size 17. Uterine morcellation is the key to a successful operation in case of vaginal surgery and obviates the need for abdominal or laparoscopically assisted hysterectomy for large and firm uterus.

DISCUSSION
The favorable characteristic for vaginal surgery was the laxity of vaginal wall which facilitates vaginal repair large uterus up to the size of 12 weeks gestation and usually without need for oophorectomy15. However, oophorectomy could easily be done after performing hysterectomy through the vaginal route16. In our study commonest indication for NDVH was DUB failure of or noncompliance to the medical treatment followed by fibroid uterus. NDVH is a good option for fibroid uterus provided the surgeon is familiar with morcellation technique.14 Bisection of uterus was done in adenomyosis cases and we also did myomectomy in larger uterus of upto 16 weeks size with multiple fibroids. However, Dorsey JW et al recommended laparoscopic assisted vaginal hysterectomy (LAVH) for uterus of more than 12 weeks size.

Table 1: Indications for performing NDVH

<table>
<thead>
<tr>
<th>Indication (n=126)</th>
<th>Percentage (%)</th>
</tr>
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<tbody>
<tr>
<td>Dysfunction uterine bleeding</td>
<td>42</td>
</tr>
<tr>
<td>Fibroid</td>
<td>29</td>
</tr>
<tr>
<td>Adenomyosis</td>
<td>14</td>
</tr>
<tr>
<td>Cervical intraepithelial neoplasia II and III</td>
<td>16</td>
</tr>
<tr>
<td>Endometrial hyperplasia</td>
<td>8</td>
</tr>
<tr>
<td>Chronic cervicitis</td>
<td>5</td>
</tr>
<tr>
<td>Postmenopausal bleeding</td>
<td>7</td>
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<tr>
<td>Pelvic inflammatory diseases</td>
<td>4</td>
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<tr>
<td>Invasive mole</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 2: Surgical complications

<table>
<thead>
<tr>
<th>Complications</th>
<th>No of the patient</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intraoperative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bladder injury</td>
<td>6</td>
<td>4.76</td>
</tr>
<tr>
<td>Rectum injury</td>
<td>1</td>
<td>0.79</td>
</tr>
<tr>
<td>Post operative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary haemorrhage</td>
<td>12</td>
<td>9.52</td>
</tr>
<tr>
<td>Vault granuloma</td>
<td>15</td>
<td>11.11</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>26.28</td>
</tr>
</tbody>
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All the authors declared no competing interest.
REFERENCES

1. Farhana Dewan, Laila Arjuman Banu, Anwara Begum. Vaginal hysterectomy in non descent uterus; Bangladesh journal of obstetrics and gynaecology; 2003; 1(1).


