

Non-descent Vaginal Hysterectomy versus Total Abdominal Hysterectomy in Benign Uterine Disorders: A comparative study in Tertiary Hospital

Latha B.

Abstract

Background: Hysterectomy is the most common surgery performed in gynecological practice. At present there are three main types of hysterectomy operations in practice for benign diseases-Abdominal hysterectomy (AH), vaginal hysterectomy (VH) and Laparoscopic hysterectomy (LH). Vaginal route for non-descent uterus is an acceptable method of hysterectomy. The objective of present study was to compare the operating duration, intraoperative and postoperative complications between Non descent vaginal hysterectomy (NDVH) and Total abdominal hysterectomy (TAH) in non-descent uterus. **Methods:** The study was conducted in the postgraduate department of obstetrics and gynecology for a period of 18 months between April 2014 to October 2015 in a tertiary care referral centre. **Results:** 100 patients were included in the study, 50 patients underwent non-descent vaginal hysterectomy and labeled as group A and 50 patients were underwent total abdominal hysterectomy and labeled as group B. It was observed that intraoperative complications and postoperative complications were less in group A patients and operating time is also less with group A patients when compared with group B patients. **Conclusions:** It was concluded that NDVH is associated with lesser intraoperative

blood loss, faster recovery, and early ambulation, less operative and less postoperative morbidity when compared to TAH. Ndvh is a less invasive technique with shorter hospital stay .

Keywords: Hysterectomy; Non-Descent Vaginal Hysterectomy; Total Abdominal Hysterectomy.

Introduction

Hysterectomy is the second most common operation performed by gynecologist, next to caesarean section. The first abdominal hysterectomy was performed by Charles Clay in Manchester in 1843. At present there are three main types of hysterectomy operations in practice -Abdominal hysterectomy (AH), vaginal hysterectomy (VH) and laparoscopic hysterectomy (LH). AH remains the predominant method of uterus removal. This route is used for malignancies, bulky uterus or when there are adhesions and removal of uterus is not possible through vaginal route. Overall mortality rates for AH or VH are 0.1-0.2%. Factors influencing the route of hysterectomy include the size and shape of the vagina and uterus; accessibility to uterus, extra uterine disease, surgeon training and experience; available hospital technology, devices and support; emergency or elective cases and preference of the patient.

Vaginal route of hysterectomy has benefits in terms of fewer morbidities, better postoperative quality of life, reduced hospital stay and better patient satisfaction. A Cochrane review of 34 randomized trials of abdominal, laparoscopic and vaginal hysterectomy, including 4,495 patients, concluded that vaginal hysterectomy has the best outcomes of these three routes. Cost

Assistant Professor,
Department of Obstetrics
and Gynaecology, JJM
Medical College, Davangere
Karnataka 577004, India.

Corresponding Author:
Latha B.,
Assistant Professor,
Department of Obstetrics
and Gynaecology, JJM
Medical College, Davangere
Karnataka 577004, India.
E-mail:
lathaananya09@gmail.com

Received on 22.06.2017,
Accepted on 24.06.2017

analysis has consistently demonstrated that vaginal hysterectomy is the most cost-effective route [8]. This study was undertaken to evaluate the appropriate route of hysterectomy (abdominal/vaginal) in tertiary care referral centre in Karnataka.

Methods

The study was conducted in the postgraduate department of obstetrics and gynecology for a period of 18 months between april 2014 to october 2015 in tertiary hospital. One hundred patients who required hysterectomy for conditions other than uterine prolapse were included in the study. Of those 100 patients, 50 females who were subjected to vaginal hysterectomy were assigned as group A. The remaining 50 females who underwent abdominal hysterectomy were taken as group B.

This was a randomized prospective hospital based, comparative study. Randomization was done based on mrd numbers. Even mrd nos. Were subjected to group a and odd mrd nos. Were subjected to group A. Indications for tah were uterus size greater than 12 weeks, endometriosis, pelvic inflammatory disease, presence of adnexal mass, unexplained pelvic pain, suspected malignancy. Indications for vh were uterine size less than 12 weeks, dysfunctional uterine bleeding, adenomyosis, chronic pid. Detailed history was taken and thorough physical examination was done in all cases admitted for hysterectomy. Written and informed consent was taken from the patient for evaluation.

All the patients received prophylactic antibiotic intravenously after sensitivity testing one hour prior to surgery. The parameters used for comparison in

two groups were: duration of surgery, intraoperative blood loss, intraoperative injury if any was noted, ambulation, post-operative Hb, fever, wound infection, postoperative pain, any evidence of infection, duration of hospital stay.

Results

A total of 100 patients were included in the study. Fifty patients underwent vaginal hysterectomy and 50 patients underwent abdominal hysterectomy. Baseline demographic characteristics were comparable in both abdominal and vaginal hysterectomy groups (Table 1 and 2). None of the patients in the vaginal group had previous pelvic surgeries while one patient in the abdominal group had history of one pelvic surgery (e.g. tubal ligation, ovarian cystectomy or laparotomy) (Table 3).

The diseases in each group were comparable. In group a, the most common indication for Ndvh was dub (56%) and in group B, the most common indication was fibroid (66%) (Table 4). No cases in the vaginal group required conversion to abdominal route. No intraoperative complications such as bladder, rectum or urethra injuries or re-laparotomies were noted in any groups. The mean duration of surgery was 48.6 minutes in the vaginal group, whereas, it was 68.2 minutes in the abdominal group, implying a significant difference ($p < 0.05$). Similarly, a significantly higher blood loss (247.7 ml) was noted in the abdominal hysterectomy group, compared to 189.1 ml in the vaginal group ($p < 0.05$). Requirement of analgesia in abdominal group in comparison to the vaginal group in the postoperative period. The mean length of hospital stay was 7.1 days in the

Table 1: Distribution according to the age group

Age group (years)	Group A	Group B
	Number of patients	
36-40	2	3
41-45	22	28
46-50	20	17
>50	6	2
Total	50	50

Table 2: Distribution according to parity

Age group (years)	Group A	Group B
	Number of patients	
P1	1 (2%)	2 (4%)
P2	6 (12%)	10 (20%)
P3	17 (34%)	12 (24%)
≥P4	26 (52%)	26 (52%)
Total	50	50

Table 3: Distribution of group A and B according to the previous surgery performed

Previous surgery	Group A		LSCS	Group B	
	LSCS	Pelvic surgery		LSCS	Pelvic surgery
No. of patients	3	0	4		0

Table 4: Distribution according to the indications of hysterectomy

Indications	Group A	Group B
Fibroid	4 (8%)	33 (66%)
DUB	28 (56%)	13 (26%)
Adenomyosis	2 (4%)	1 (2%)
Adnexal mass	0 (0%)	2 (4%)
Chronic cervicitis	11 (22%)	0 (0%)
Endometrial hyperplasia	5 (10%)	1 (2%)

Table 5: Distribution according to the intraoperative and postoperative observations

Variables	Group A	Group B
Duration of surgery (min)	48.6	68.2
Blood loss (ml)	189.1	247.7
Pain score on day 3 (cm)	1.80	2.88
Ambulation (days)	1.38	2.48
Duration of hospital stay (days)	3.1	7.1
Postop Hb (gm%)	10.1	7.89

Table 6: Distribution of postoperative complications

Postoperative complications	Group A	Group B
Febrile morbidity	3	9
Wound infection	1	12
UTI	1	2
Respiratory infection	1	2
Paralytic ileus	0	2
Vaginal discharge	1	1

abdominal group while the duration was 3.1 days in the vaginal group. Mean time to postoperative mobility and mean maximum postoperative body temperature in the vaginal hysterectomy group were significantly shorter and less severe respectively than those in the abdominal group ($p < 0.05$).

Number of patients requiring postoperative blood transfusion in the vaginal group was less in comparison to the abdominal group. Significantly high postoperative wound infection rate in 7% patients of the abdominal group, compared to the vaginal group ($n=0$). However, there was no significant difference in the rates of systemic infection like respiratory tract infection, urinary tract infection, paralytic ileus and acute gastroenteritis postoperatively in both the groups (Table 5 and 6).

Discussion

It is well known fact that 70-80% of hysterectomies

done for benign condition are through abdominal route. Vaginal hysterectomies are usually performed for prolapsed case [9]. With adequate vaginal access and technical skill, good uterine mobility vaginal hysterectomy can easily be achieved. The main supports of the uterus, the uterosacral and cardinal ligaments situated in close proximity to vaginal vault can be easily divided to produce descent [10]. multiparity, lax tissue due to poor involution following multiple deliveries and lesser tensile strength afford a lot of comfort to vaginal surgeon even in presence of significant uterine enlargement. In our study, almost eighty five percent of the patients had parity of more than equal to three in both the groups and size of the uterus above 10 weeks was 44%. We could remove uterus up to 14 weeks pregnancy size vaginally without any increase in surgical complication. Banarsee bhadra et al and sahar et al were also able to remove uteri vaginally of the size of >10 weeks in their studies [9,11].

In present study, most of the patients were in the

age group of 41-50 years of age (44%) and were multipara, which were compatible with Kovacs, Dewan Rupali et al study [4,10] the commonest indication for vaginal hysterectomy in non-descent cases was fibroid uterus followed by adenomyosis.

Comparable with Banarsee Bhadra et al study [9]. In this study, most of the non-descent vaginal hysterectomy needed 48.6 minutes, comparatively faster operating technique resulted in shorter hospital stay and less post-operative morbidity has been reported in comparison to TAH and present results were comparable with Pradeep Kumar et al [12].

In present study, it was observed that one case of vaginal vault frank infection was noted in group a whereas 7 patients with frank wound infection in group b and was compatible with Razia Iftikar and Sunanda Bharatnur et al study [13,14]. It was noted that 3 (6%) patients in group a while 9 (18%) patients in group b were febrile in the postoperative period and it was compatible with Pradeep Kumar Garg et al [12]. In group a one patient developed UTI and one patient had RTI during postoperative period and was compatible with Razia Iftikar and Sunanda Bharatnur et al study [13,14]. In the group b, 2 (4%) patients had urinary tract infection, 2 (4%) had respiratory tract infection and 2 (4%) had paralytic ileus in the postoperative period. No case of paralytic ileus was reported in NDVH group. One patient in group b was admitted with complaints of vaginal discharge and was compatible with Iftikar R et al and Bharatnur S study [13,14].

Conclusion

We concluded that NDVH is associated with less intraoperative blood loss, faster recovery, early mobilization, lesser intraoperative and postoperative morbidity and faster discharge from hospital when compared to TAH. Minimal intraoperative manipulation and the avoidance of an abdominal incision is a remarkable advantage of NDVH.

Funding: No Funding Sources

Conflict of Interest: None Declared

Ethical Approval: The Study Was Approved By The Institutional Ethics Committee.

References

1. Singh KC, Barman SD, Sengupta R. Choice of hysterectomy for benign disease, department of obstetrics and gynecology, University College of medical sciences, Delhi. *J Obstet Gynaecol.* 2004;54: 365-70.
2. De Frances CJ, Hall MJ. 2005 National Hospital Discharge Survey. *Adv Data.* 2007;(385):1-19.
3. Choosing the route of hysterectomy for benign disease. ACOG Committee Opinion No. 444. American College of obstetricians and gynecologists. *Obstet Gynecol.* 2009;114(5):1156-8.
4. Kovac SR. Transvaginal Hysterectomy: rationale and surgical approach. *Obstet Gynaecol.* 2004;103:1321-5.
5. Harris WJ. Early Complications of Abdominal and Vaginal hysterectomy. *Obstet Gynaecol Surv.* 1995;50:795-805.
6. McCracken G, Lefebvre GG. Vaginal hysterectomy: Dispelling the myths. *JOGS.* 2007;29(5):424-7.
7. Alokandanda R, Luna P, Roshan B, Rashmi C. Non descent vaginal hysterectomy: A constantly improving surgical art. *J Obstet Gynaecol.* 2011;61: 182-8.
8. Bandyopadhyay S, Pal M. Non-descent vaginal hysterectomy-Analysis of 100 cases. *Asian J Medical Science.* 2012;3:1-5.
9. Bhandra B, Choudhury AP, Nupur AJN. Non descent vaginal hysterectomy: Personal experience in 158 cases. *J Med Sci.* 2011;4:23-7.
10. Rupali D, Shivani A, Bharti MM, Soumendhra KS. Non descent vaginal hysterectomy An experience. *J Obstet Gynaecol.* 2004;54:376-8.
11. Saha R, Shrestha NS, Thapa M, Shrestha J, Bajracharya J, Padhye SM. Non-descent Vaginal hysterectomy: Safety and Feasibility. *NJOG.* 2012;7(2):14-6.
12. Garg P, Malhotra N, Deka D. Vaginal approach for hysterectomy in benign conditions of the uterus at a rural health setting. *Obstet Gynaecol Today.* 2003; 520-2.
13. Iftikhar R. Vaginal Hysterectomy is Superior than Abdominal Hysterectomy. *J Surgery Pakistan.* 2008;13(2):55-8.
14. Bharatnur S. Comparative study of abdominal versus vaginal hysterectomy in non- descent cases. Internet J.