International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Abrol S et al. Int J Reprod Contracept Obstet Gynecol. 2017 Mar;6(3):846-849
www.ijrcog.org

pISSN 2320-1770 | eISSN 2320-1789

DOI: http://dx.doi.org/10.18203/2320-1770.ijrcog20170472

Original Research Article

Comparative analysis of non-descent vaginal hysterectomy versus total abdominal hysterectomy in benign uterine disorders

Shivani Abrol*, Shazia Rashid, Farhat Jabeen, Shiveta Kaul

Department of Gynecology and Obstetrics, Lalla Ded Hospital, Government Medical College, Srinagar, Jammu and Kashmir, India

Received: 22 January 2017
Accepted: 28 January 2017

***Correspondence:**
Dr. Shivani Abrol,
E-mail: shivanianita5@gmail.com

ABSTRACT

Background: Hysterectomy is the most common operation performed by gynecologist, next to caesarean section. Currently, 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 time, intraoperative and postoperative complications between VH and TAH in non-descent uterus.
Methods: The study was conducted in the Postgraduate department of Gynaecology and Obstetrics for a period of 18 months between April 2013 to October 2014 in the Government Lalla Ded Hospital - an associated hospital of Government Medical College, Srinagar; which is the sole tertiary care referral centre in the valley.
Results: Over the study period 100 patients were taken, 50 patients underwent non-descent vaginal hysterectomy and labelled as group A and 50 patients were under went total abdominal hysterectomy and labelled as group B. It was seen 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: From the present study, it was concluded that NDVH is associated with less blood loss during surgery, quicker recovery, and early mobilization, less operative and less postoperative morbidity when compared to TAH. NDVH is a less invasive technique with shorter hospital stay and faster convalescence.

Keywords: Hysterectomy, Non-descent vaginal hysterectomy

INTRODUCTION

Hysterectomy is the most common operation performed by gynaecologist, next to caesarean section.[1] The first abdominal hysterectomy was performed by Charles clay in Manchester in 1843. Vaginal hysterectomy dates to ancient times. Advances in anaesthesia, transfusion services, surgical techniques and availability of antibiotics led to hysterectomy becoming the most common non-pregnancy related major surgical procedure in women.[2] Factors that may influence the route of hysterectomy for benign causes include the size and shape of the vagina and uterus; accessibility to the uterus; extent of extra uterine disease; the need for concurrent procedures; surgeon training and experience; available hospital technology, devices and support; emergency or scheduled cases; and preference of the informed patient.[3] Currently, there are three main types of hysterectomy operations in practice for benign diseases-Abdominal hysterectomy (AH), vaginal hysterectomy (VH) and Laparoscopic hysterectomy (LH). AH remains the predominant method of uterine removal. This route is used for malignancies, bulky uteri or when there are adhesions and removal of uterus is not possible through vaginal route.[4] Overall mortality rates for AH or VH are 0.1-0.2%.[5] Vaginal route for non-descent uterus is an

acceptable method of hysterectomy despite previous belief that it is the contraindication in certain conditions.[6] Vaginal route of hysterectomy has distinct health and economic benefits in terms of fewer morbidities, better postoperative quality -of-life outcomes, reduced hospital stay and better patient satisfaction.[7] 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 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 the Government Lalla Ded Hospital - an associated hospital of Government Medical College, Srinagar; which is the sole tertiary care referral centre in the valley for Obstetrics and Gynaecology.

METHODS

The study was conducted in the Postgraduate department of Gynaecology and Obstetrics for a period of 18 months between April 2013 to October 2014 in the Government Lalla Ded Hospital - an associated hospital of Government Medical Srinagar. 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 Randomised prospective hospital based, comparative study. Randomisation was done based on MRD numbers. Even MRD nos. were subjected to group A and Odd MRD nos. were subjected to group B. Indications for TAH were uterus size greater than 12 weeks, endometriosis, PID, presence of adnexal mass, unexplained pelvic pain, suspected malignancy. Indications for VH were uterine size less than 12 weeks, dysfunctional uterine bleeding, quality 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 included in the study were subjected to detailed history and clinical examination including both general physical and systemic.

All the patients received prophylactic antibiotic Cefotaxime 1gm intravenously after sensitivity testing one hour prior to surgery. The main 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, follow-up.

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). None of the cases in the vaginal group were converted to abdominal route.

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.

Parity	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		Group B	
	LSCS	Pelvic surgery	LSCS	Pelvic surgery
No. of patients	3	0	4	1

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%)

There were no intraoperative complications such as bladder, rectum or urethra injuries or re-laparotomies 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).

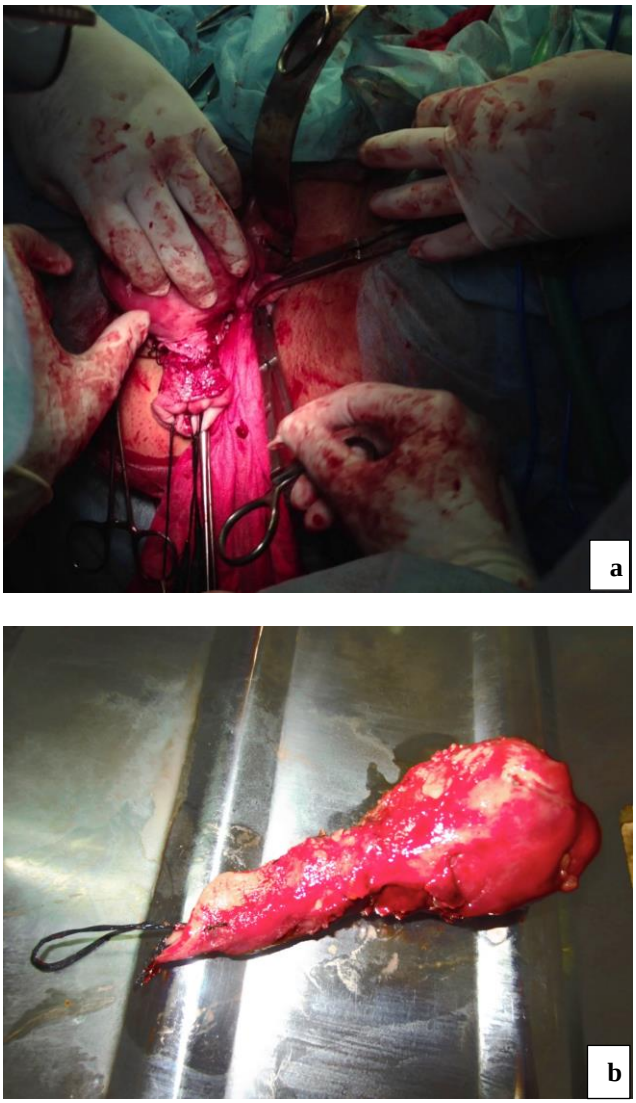

Figure 1a and b: Non-descent uterus of 14 weeks being delivered vaginally.

Postoperatively, the abdominal group required more analgesia in comparison to the vaginal group. The mean length of hospital stay was 7.1 days in the 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).

Significantly lesser number of patients required postoperative blood transfusion in the vaginal group compared 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).

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	13
Wound infection	1	7
UTI	1	3
Respiratory infection	1	4
Paralytic ileus	0	3
Vaginal discharge	1	1
Vault haematoma	0	1

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 Saha R 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 Kovac S, Dewan Rupali et al study.[4,10] The commonest indication for vaginal hysterectomy in non-descent cases was DUB followed by fibroid uterus and adenomyosis which was also

compatible 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 as has been reported in comparison to TAH and present results were compatible 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 13 (26%) 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] One patient of group A was re-admitted following complaints of vaginal discharge on her first follow up visit. In the group B, 3 (6%) patients had UTI, 4 (8%) had RTI and 3 (6%) 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 bleeding. The pelvic ultrasound showed a vaginal vault haematoma of size 3x3 cm which was managed conservatively and 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

From the present study, it was concluded that NDVH is associated with less blood loss during surgery, quicker recovery, and early mobilization, less operative and less postoperative morbidity when compared to TAH. Minimal intraoperative manipulation and the avoidance of an abdominal wound is a remarkable advantage of NDVH especially for obese, elderly and medically debilitated patients. Length of hospital stay is significantly less for NDVH when compared to TAH. NDVH is a less invasive technique with shorter hospital stay and faster convalescence.

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 gynaecology, 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 gynaecologists. 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. Alokananda 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, Soumendra KS. Non descent vaginal hysterectomy An experience. J Obstet Gynaencol. 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 Gynaecology and Obstetrics. 2010;15.

Cite this article as: Abrol S, Rashid S, Jabeen F, Kaul S. Comparative analysis of non-descent vaginal hysterectomy versus total abdominal hysterectomy in benign uterine disorders. Int J Reprod Contracept Obstet Gynecol 2017;6:846-9.