Journal of Cardiovascular Disease Research

ISSN: 0975-3583,0976-2833 VOL14, ISSUE 01, 2023

ORIGINAL RESEARCH

Comparative study of vaginal versus abdominal hysterectomy in nonprolase patients with respect to outcome

Vilas Pandurang Deshmukh

Assistant Professor, Department of OBGY, BKL Rural Medical College, Kasarwadi, Post Sawarde, Taluka Chiplun, District Ratnagiri, 424506. India.

Received Date: 02 December 2022 Accepted Date: 04 January 2023

ABSTRACT

Background: Hysterectomy is the most commonly performed elective major gynaecological surgery. Routes for hysterectomy include abdominal, vaginal, laparoscopic, or combined approaches. Present study was aimed to compare vaginal versus abdominal hysterectomy in nonprolase patients with respect to outcome at a tertiary hospital. Material and Methods: Present study was hospital based, comparative study, conducted in patients 40-60 years age, posted for hysterectomy, with uterine size not exceeding 12 weeks of gravid uterus, adequate uterine mobility. Patients were divided as Group A (n = 55) underwent vaginal hysterectomy (non-descent vaginal hysterectomy, NDVH) while Group B (n = 55) who had abdominal hysterectomy. Results: Age Group (years), parity, previous surgeries & medical disease were comparable among both groups & difference was not statistically significant. In present study, majority of NDVH surgery patients had uterine size of 8 weeks (34.55 %), while majority of AH surgery patients also had uterine size of 8 weeks (38.18 %). Uterine size was comparable among both groups & difference was not statistically significant. NDVH surgery required less time as compared to AH surgery & difference was statistically significant (p- 0.35). Intraoperative complications were less in NDVH surgery as compared to AH surgery & difference was statistically significant (p- 0.29). Post-operative complications were less in NDVH surgery as compared to AH surgery & difference was statistically significant (p- 0.22). Majority of NDVH surgery patients were discharged in ≤ 4 days, while majority of AH surgery patients were discharged in 4-8 days, & difference was statistically significant (p- 0.005). Conclusion: We noted that NDVH surgery is associated with better outcome as NDVH patients had decreased operative time, less post-operative morbidity, early ambulation and early discharge from hospital as compared to AH surgery patients.

Keywords: NDVH, abdominal hysterectomy, post-operative morbidity, outcome.

Corresponding Author: Dr. Vilas Pandurang Deshmukh, Assistant Professor, Department of OBGY, BKL Rural Medical College, Kasarwadi, Post Sawarde, Taluka Chiplun, District Ratnagiri, 424506. India.
Email: ddrvilas@gmail.com

INTRODUCTION

Hysterectomy is the most commonly performed elective major gynaecological surgery. Routes for hysterectomy include abdominal, vaginal, laparoscopic, or combined approaches.[1] Traditional abdominal hysterectomy (AH) is one of the most common gynaecological surgical procedures in the treatment of benign gynaecological diseases. The ease and convenience offered by a large abdominal incision have led to the preponderance of abdominal hysterectomy over the vaginal route.

ISSN: 0975-3583,0976-2833 VOL14, ISSUE 01, 2023

The abdominal approach is still being used by the majority of surgeons as the operation of choice, particularly when dealing with pelvic malignancy or for carrying out oophorectomy.[2] The emphasis on minimally invasive surgery has led to resurgence of interest and importance of vaginal hysterectomy for non-prolapse indication, i.e. non-descent vaginal hysterectomy.[3] The size of the uterus, nulliparity, previous pelvic surgery or lower segment caesarean section (LSCS), pelvic adhesions and endometriosis are the commonly cited limitations for vaginal hysterectomy. But now vaginal hysterectomy in larger sized uterus is facilitated by bisection, myomectomy, debulking, coring and clamp less approach etc.[4,5] Present study was aimed to compare vaginal versus abdominal hysterectomy in nonprolase patients with respect to outcome at a tertiary hospital.

MATERIAL AND METHODS

Present study was hospital based, comparative study, conducted in Department of OBGY, BKL Rural Medical College, Kasarwadi, Post Sawarde, Taluka Chiplun, District Ratnagiri, 424506. India., India. Study duration was of 1 year (January 2022 to December 2022). Study approval was obtained from institutional ethical committee.

Inclusion criteria

- Patients 40-60 years age, posted for hysterectomy, with uterine size not exceeding 12 weeks of gravid uterus, adequate uterine mobility, willing to participate in present study

Exclusion criteria

- Prolapsed uterus.
- Patients with complex adnexal mass.
- Patients with previous 2 or more LSCS.
- Malignant uterine conditions

Study was explained to patients in local language & written consent was taken for participation & study. Patients participating in study underwent detailed history taking (demographic data, clinical features, medical, surgical history) and through general, systemic & local examination. Preoperative anaesthesia fitness, pap smear and ultrasound was done for all cases. The mode of surgery was decided by the operating surgeon after detailed discussion with the patient.

Group A (n = 55) underwent vaginal hysterectomy (non-descent vaginal hysterectomy, NDVH)
Group B (n = 55) who had abdominal hysterectomy.

All patients received prophylactic Inj. cefotaxime on operation table just before skin incision. The operating time was noted from time of incision till the end of the procedure. Intraoperative blood loss, operative difficulties, complications, blood transfusion, mobility, febrile morbidity, infections, hospital stay, conversion to abdominal route, re-laparotomy were recorded and the data was statistically analysed using Chi-square test and t-test and p-value was determined.

RESULTS

Both groups Group A (NDVH) & Group B (AH) had 55 patients each. Age Group (years), parity, previous surgeries & medical disease were comparable among both groups & difference was not statistically significant.

ISSN: 0975-3583,0976-2833 VOL14, ISSUE 01, 2023

Table 1: General characteristics

Characteristics	Group A (NDVH = 55)	Group B (AH = 55)	p value
Age Group (years)			0.83
41-50	36 (65.45 %)	34 (61.82 %)	
51-60	19 (34.55 %)	21 (38.18 %)	
Parity			0.68
0	6 (10.91 %)	9 (16.36 %)	
1	11 (20 %)	6 (10.91 %)	
2	17 (30.91 %)	22 (40 %)	
≥ 3	21 (38.18 %)	18 (32.73 %)	
Previous surgeries.			0.71
Caesarean section	3 (5.45 %)	3 (5.45 %)	
Appendicectomy	1 (1.82 %)	1 (1.82 %)	
Lap.TL	11 (20 %)	12 (21.82 %)	
Abdo TL	13 (23.64 %)	15 (27.27 %)	
Medical disease			0.73
Diabetes	3 (5.45 %)	2 (3.64 %)	
Hypertension	5 (9.09 %)	5 (9.09 %)	
Severe anemia	2 (3.64 %)	3 (5.45 %)	
Heart disease	1 (1.82 %)	2 (3.64 %)	
Hypothyroidism	2 (3.64 %)	3 (5.45 %)	

In present study, majority of NDVH surgery patients had uterine size of 8 weeks (34.55 %), while majority of AH surgery patients also had uterine size of 8 weeks (38.18 %). Uterine size was comparable among both groups & difference was not statistically significant.

Table 2: Distribution according to the size of uterus.

Size of uterus (in weeks)	Group A (NDVH = 55)	Group B (AH = 55)	p value
Bulky	16 (29.09 %)	9 (16.36 %)	0.58
8	19 (34.55 %)	21 (38.18 %)	
10	11 (20 %)	13 (23.64 %)	
12	9 (16.36 %)	12 (21.82 %)	

NDVH surgery required less time as compared to AH surgery & difference was statistically significant (p- 0.35).

Table 3: Time taken for surgery.

Time (hours)	Group A (NDVH = 55)	Group B (AH = 55)	p value
≤1	43 (78.18 %)	29 (52.73 %)	0.35
1-2	12 (21.82 %)	26 (47.27 %)	

In present study, in group B common complications observed were, haemorrhage (9.09 %), adhesions (5.45 %) & bladder injury (1.82 %), while no complications observed in 49 cases (89.09 %). In group A complications observed were, haemorrhage (1.82 %) & adhesions (1.82 %), while no complications observed in 52 cases (94.55 %). Intraoperative complications were less in NDVH surgery as compared to AH surgery & difference was statistically significant (p-0.29).

Table 4: Intraoperative complications

ISSN: 0975-3583,0976-2833 VOL14, ISSUE 01, 2023

Intraoperative complications	Group A (NDVH = 55)	Group B (AH = 55)	p value
Haemorrhage	2 (3.64 %)	5 (9.09 %)	0.29
Adhesions	2 (3.64 %)	3 (5.45 %)	
Bladder injury	0	1 (1.82 %)	
No Complications	52 (94.55 %)	49 (89.09 %)	

In group B, post-operative complications observed were fever (9.09 %), wound complication (9.09 %), need for transfusion (7.27 %), urinary tract infection (5.45 %), paralytic ileus (3.64 %) & respiratory tract infection (1.82 %). In group A, post-operative complications observed were fever (3.64 %), need for transfusion (3.64 %), urinary tract infection (1.82 %), respiratory tract infection (1.82 %) & paralytic ileus (1.82 %). Post-operative complications were less in NDVH surgery as compared to AH surgery & difference was statistically significant (p- 0.22).

Table 5: Post-operative complications

Post-operative complications	Group A (NDVH = 55)	Group B (AH = 55)	p value
Fever	2 (3.64 %)	5 (9.09 %)	0.22
Urinary tract infection	1 (1.82 %)	3 (5.45 %)	
Respiratory tract infection	1 (1.82 %)	1 (1.82 %)	
Paralytic ileus	1 (1.82 %)	2 (3.64 %)	
Wound complication	0	5 (9.09 %)	
Need for transfusion	2 (3.64 %)	4 (7.27 %)	

In present study, majority of NDVH surgery patients were discharged in ≤ 4 days, while majority of AH surgery patients were discharged in 4-8 days, & difference was statistically significant (p- 0.005).

Table 6: Post-operative stay.

Post-operative stay (days)	Group A (NDVH = 55)	Group B (AH = 55)	p value
≤ 4	35 (63.64 %)	20 (36.36 %)	0.005
4-8 days	19 (34.55 %)	22 (40 %)	
>8 days	1 (1.82 %)	13 (23.64 %)	

DISCUSSION

Generally, choice of approach should be based on the surgical indication, the patient's anatomical condition, data supporting the approach, informed patient preference, and the surgeon's expertise and training.[6] Abdominal route is preferred over vaginal route for non-prolapsed uterus even though multiple studies stating that the vaginal route is preferred to abdominal route.[6]

The ease and convenience offered by a large abdominal incision and better operative field vision have led to preference of abdominal route over vaginal route. But, now as emphasis is on minimal invasive surgery so vaginal and laparoscopic route has gained interest even for non- prolapsed uterus.[7]

Shachi AJ[8] studied 120 cases, most common indication was fibroid uterus; there was a statistical highly significant difference in blood loss. Postoperatively, complications were more common in those who underwent abdominal hysterectomy. Postoperatively, patients who underwent vaginal hysterectomy ambulated earlier and were discharged earlier. Vaginal hysterectomy is a safe, least invasive route and is associated with lesser complications.

Priyadarshini M[9] noted that patients who underwent TAH had a mean operating time of 63.44 +/- 11.94 minutes while those who underwent NDVH had mean operating time of 54.21 mins

ISSN: 0975-3583,0976-2833 VOL14, ISSUE 01, 2023

(p<0.001). The mean blood loss in the NDVH group was 86.41+/-17.54 ml while in TAH was185.70+/-60.73ml (p<0.001). The duration of hospital stay in the TAH arm was 7.19+/-1.17 days, whereas in the NDVH arm was 4.06+/-1.10days (p<0.001). The overall complications encountered with TAH was significantly more than NDVH (p=0.01), but there were no significant major complications encountered in both the groups.

Chavhan RP et al.,[10] noted that patients undergoing NDVH had an average operating time of 48.68 mins whereas for those undergoing TAH was 92.52 mins ('p'- value <0.001). Intra-operative complications were noted in 2% of patients undergoing NDVH whereas in 20% of patients undergoing TAH ('p'- value 0.016). Post-operative complications were noted in 34% of patients undergoing NDVH v/s 70% in TAH ('p'- value <0.001). Patients undergoing NDVH had a mean hospital stay of 5.96 days whereas 9.10 days in those undergoing TAH ('p'- value <0.001). NDVH is associated with decreased operative time, post-operative morbidity, early ambulation and early discharge from hospital compared to TAH.

Vagina is the natural route to access the uterus and with good anesthesia facility, adequate light and exposure, better suture materials and operative technique the vaginal approach to explore the uterus has gained popularity. Vaginal route offers cosmetic benefit as it leaves no disfiguring visible scar. NDVH is less invasive, scar less operation and cost effective for patient but it has its own limitation like difficult to approach through narrow vagina, adnexal pathology and in scarred uterus.[11]

Pelvic inflammatory disease, previous surgeries, and narrow vagina make vaginal hysterectomy difficult to be performed are not considered to be contra-indications for non-descent vaginal hysterectomy and can be successfully attempted in all these conditions. It has a clear advantage over the abdominal route in obese women. However, proper selection of patients is a critical factor in determining the success of vaginal procedures. Lack of expertise and the curve in learning the technique also has major impact on the number of procedures performed.[12,13,14]

Vaginal hysterectomy in true sense is a scar less hysterectomy. Vagina is the ideal and most natural route to approach the uterus along with the availability of good anesthesia, light, better suture material, electrosurgical technique, exploration of uterus through vaginal route is becoming increasing popular. Minimally invasive approaches to hysterectomy (vaginal or laparoscopic) should be performed whenever feasible. Vaginal approach is preferred. For an individual patient, the surgeon should account for clinical factors and determine which route will most safely facilitate removal of uterus and optimize patient outcomes, given the clinical situation and surgeon training and experience.[15]

CONCLUSION

We noted that NDVH surgery is associated with better outcome as NDVH patients had decreased operative time, less post-operative morbidity, early ambulation and early discharge from hospital as compared to AH surgery patients.

REFERENCES

1. Ottosen C, Lingman G, Ottosen L. Three methods for hysterectomy: a randomized, prospective study of short term outcome. BJOG 2000;107(11):1380–1385.
2. McCracken G, Hunter D, Morgan D, Price JH. Comparison of Laparoscopic assisted vaginal hysterectomy, total abdominal hysterectomy and vaginal hysterectomy. Ulster Med J 2006 Jan;75(1):45-48.
3. Dewan R, Agarwal S, Manisha, Minocha B, Sen SK. Non-Descent vaginal hysterectomy-an experience. J Obstet Gynaecol India. 2004;54:376-8.
4. Naina kumar, Surekha Tayade. Role of vaginal hysterectomy in previous caesarean section scar women. Int J Reprod Obstet Gynaecol. 2015;4:785-9.

ISSN: 0975-3583,0976-2833 VOL14, ISSUE 01, 2023

5. Paparella P, Sizzi O, Rossetti A, De Benedittis F, Paparella R. Vaginal hysterectomy in generally considered contraindications to vaginal surgery. Arch Gynecol Obstet. 2004;270:104-9.
6. ACOG Committee Opinion. Number 311, April 2005. Appropriate use of laparoscopically assisted vaginal hysterectomy. Obstet Gynecol. 2005;105: 929–30.
7. Balakrishnan D, Dibyajyoti G. A COmparision between Non- descent vaginal hysterectomy and total abdominal hysterectomy. Journal of clinical and Diagnostic Research, 2016 Jan, Vol-10(1):QC11-QC14.
8. Shachi Ashit Joshi, Comparative study of vaginal hysterectomy and abdominal hysterectomy in nondescent uterus, Indian Journal of Obstetrics and Gynecology Research 2016;3(4):379-382
9. Priyadarshini M, Hansda R. A comparative study between total abdominal hysterectomy and non-descent vaginal hysterectomy. Indian J Obstet Gynecol Res 2020;7(2):153-156.
10. Chavhan RP, Arora G, Pajai S. Comparative study between vaginal and abdominal hysterectomy in non-descent cases. Int J Sci Rep 2016;2(3):48-52.
11. Durga BC, Sharma A, Mahaseth B, Sharma N. A Comparative evaluation of Non-descent vaginal hysterectomy versus total Abdominal hysterectomy: A hospital based case control study. Journal of Nepalgunj Medical College. 2019 Aug 22;17(1):20-2.
12. Umeora OUJ, Onoh RC, Eze JN, Igberase GO. Abdominal versus vaginal hysterectomy: Appraisal of indications and complications in a Nigerian Federal Medical Centre. Nep Journ OG. 2009;4(1):25-29.
13. Aniuliene R, Varzgaliene L, Varzgalis M. A comparative analysis of hysterectomies. Medicina (Kaunas). 2007;43:118-24.
14. Shanthini NF, Poomalar GK, Jayshree M, Bupaty A. Evaluation of complications of abdominal and vaginal hysterectomy. Int J Reprod Contracept Obstet Gynecol. 2012;1(1):7-11.
15. ACOG Committee Opinion. Number 701, choosing the route of hysterectomy for benign disease. Obstet Gynecol 2017;129(6):e155.