

A review of vaginal hysterectomies in the gynaecology department of a tertiary care hospital

Tayyiba Wasim¹, Gul e Rana², Javeria Zunair³, Tahira Nasrin⁴, Sonia Irshad⁵

Abstract

This retrospective cohort study analysed the trends and complications of vaginal hysterectomy conducted at Services Hospital, Lahore, from January 1, 2015 to December 31, 2020. Demographics, indications, surgery duration, complications (haemorrhage, urological or rectal problems, infection), and hospital stay were recorded. Out of 819 hysterectomies performed for benign gynaecological conditions, 112 (13.68%) were vaginal hysterectomies. Non-descent vaginal hysterectomy (NDVH) accounted for 33(29.46%) and uterine prolapse for 79(70.53%) of the cases. Mean age was 52.35±8.74 years, parity was 5.01±1.32, intraoperative haemorrhage was 796.87±450.1 ml, surgery duration was 48.61±12.28 minutes, and hospital stay was 2.58±0.41 days. Complications occurred in 19(16.97%) of the cases, while 93(83.03%) cases had no complications. Outcomes were comparable between NDVH and vaginal hysterectomy for prolapse ($p=0.552$). This indicates that vaginal hysterectomy is a safe procedure with minimal complications and quick recovery for uterine prolapse and non-descent uterus. However, a declining trend was observed over the study period.

Keywords: Vaginal hysterectomy, Uterine prolapse, Complications.

DOI: <https://doi.org/10.47391/JPMA.9728>

Introduction

Hysterectomy is the surgical removal of uterus and one of the most frequently performed major gynaecological surgeries. Hysterectomy can be performed through different routes such as abdominal, vaginal, or laparoscopic.

The American College of Obstetricians and Gynaecologists (ACOG) and International Society for

^{1,2,4,5}Department of Obstetrics and Gynaecology, Services Hospital,
³Department of Obstetrics & Gynecology, Sheikh Zayed hospital, Lahore.
Pakistan

Correspondence: Tayyiba Wasim. Email: tayyibawasim@yahoo.com

ORCID ID. 0000-0003-2444-9817

Submission complete: 17-04-2023

Review began: 14-06-2023

Acceptance: 03-01-2024

Review end: 30-10-2023

Gynaecologic Endoscopy (ISGE) recommend vaginal hysterectomy as the first choice for benign gynaecological conditions, while laparoscopic approach should be considered when vaginal hysterectomy is contraindicated or technically impossible.^{1,2}

Vaginal hysterectomy is largely under-utilised and globally the trends are decreasing. Laparoscopic hysterectomy has replaced abdominal hysterectomy in the developed world but despite having more morbidity, abdominal route is common in low- and middle-income countries (LMIC).^{3,4}

This study was planned to evaluate the trends in vaginal hysterectomy for benign diseases over a period of six years at Services Hospital, Lahore, and to assess the safety of the procedure in terms of intraoperative and postoperative complications so that better approach can be planned.

Methods

It was a retrospective cohort study which was carried out at the Department of Gynaecology and Obstetrics, Services Hospital, Lahore, from January 2015-December 2020. Medical records of all patients who had undergone hysterectomy over this period were retrieved after approval from the ethical committee (reference No. IRB/2021/900/SIMS). The case files were reviewed and data regarding socio-demographic characteristics, indications for vaginal hysterectomy, duration of the procedure, amount of blood loss during surgery, duration of hospital stay and post-operative complications till one week, was extracted using a purpose designed proforma. Data was analysed using SPSS version 22.0. A p-value of < 0.05 was selected as test of significance.

Results

During the six-year study period, 819 hysterectomies were performed for benign gynaecological causes. Of these, 707(86.32%) were abdominal hysterectomies whereas 112 (13.68%) were vaginal hysterectomies. Average rate of vaginal hysterectomies over this period of six years was 18.67 per year. The rate of vaginal hysterectomy showed a declining trend over a period of six years as shown in Figure 1.

Mean age of the patients was 52.35±8.74 years with mean

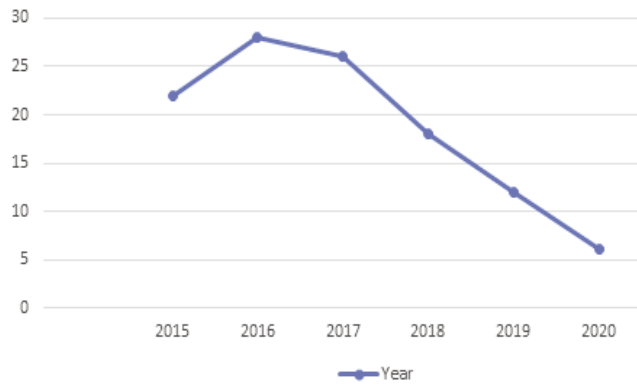


Figure: Trend of vaginal hysterectomy over six years

Table-1: Demographic, indication and complications in patients undergoing vaginal hysterectomy(N=112)

Characteristics	Mean \pm SD/Frequency
Age (years)	52.35 \pm 8.74
Parity	5.01 \pm 1.32
Occupation	
Housewife	109 (97.32%)
Working	3 (2.67%)
Education	
Uneducated	68 (60.71%)
Primary	24 (21.42%)
Middle and above	20 (17.85%)
Residence	
Rural	68 (60.71%)
Urban	44 (39.28%)
Estimated blood loss (ml)	796.87 \pm 450.1
Duration of surgery (min)	48.61 \pm 12.28
Hospital stay (days)	2.58 \pm 0.41
Indications for surgery	
Non Prolapsed uterus (size<12weeks)	33 (29.46%)
Uterovaginal prolapse	79 (70.53%)
No complications	93 (83.03%)
Complications	19 (16.96%)
Blood Transfusion	8 (7.14%)
Urinary problems	2 (1.78%)
Vault Haematoma	4 (3.5%)
Post-Operative pyrexia	5 (4.4%)

parity of 5.01 \pm 1.32. Sixty-eight (60.71%) patients did not have any education. Out of the total, 79(70.53%) patients had prolapse, while 33(29.46%) had non-descent vaginal hysterectomy (NDVH) for heavy menstrual bleeding. Average blood loss was 796.87 \pm 450.1 ml, the duration of surgery was 48.61 \pm 12.28 minutes, and hospital stay was 2.58 \pm 0.41 days. No complications were observed in 93(83.03%) patients. (Table 1).

There were no complications in 65(82.24%) out of 79 patients in whom vaginal hysterectomy was done for

Table-2: Comparison of post-operative complications in vaginal hysterectomy for prolapsed uterus versus non-descent vaginal hysterectomy.

Complications	Vaginal hysterectomy for prolapsed uterus (N=79)	Non-descent vaginal hysterectomy (NDVH) (N=33)	P-value
No complication	65 (82.24%)	28 (84.84%)	0.552
Blood transfusion	7 (8.8%)	1 (3.03%)	
Urinary complications	10 (12.6%)	2 (6.06%)	
Vault Haematoma	3 (3.7%)	1 (3.03%)	
Post-Operative pyrexia	4 (5.0%)	1 (3.03%)	

uterine prolapse and 28(84.84%) patients with NDVH ($p=0.552$). There were few complications which were not statistically significant in both the groups (Table 2).

Discussion

During the six-year study period, 112 (13.6%) vaginal hysterectomies were done for benign gynaecological condition. Similar numbers were seen in other studies which reported 16.5%–17.8% vaginal hysterectomies with decreasing trend over the years.^{5,6} A Nigerian study, conducted over a period of 14 years, reports a rate of 2.3% vaginal hysterectomy out of major gynaecological operations.⁷ It indicates that vaginal hysterectomy procedure rate is declining globally and abdominal approach is being preferred. Abdominal hysterectomy is easier for the surgeon due to wide exposure, but it is associated with more complications as compared with vaginal hysterectomy. Abdominal hysterectomy is associated with increased blood loss, fall in haemoglobin level, more analgesia requirement, and post-operative morbidity in terms of increased chances of wound complications, while vaginal hysterectomy has fewer complications with faster return to activity.⁸

The developed world has shifted towards minimally invasive surgery but it is not possible in LMICs, where resources are deficient and laparoscopic equipment is expensive, proper training is required and it is not available at public sector hospitals and at rural settings where most of the community resides. Cochrane review of 42 studies with 5,102 patients comparing various routes of hysterectomy, concluded that vaginal hysterectomy is superior to LH and abdominal hysterectomy.⁹ In the present study, surgery was performed due to uterine prolapse in 79(70.53%) patients, while non-descent vaginal hysterectomy was done in 33 (29.46%) patients mostly due to heavy menstrual bleeding. Uterine prolapse is the main indication for vaginal hysterectomy in various studies.^{6,7} There were no complications in 93 (83.03%) cases. Mean operative blood loss was 796.87 \pm 450.1 ml, while mean operative time was 48.61 \pm 12.28 minutes. Mean duration of surgery as

39.6±65.2 minutes has been reported by various studies with less average blood loss as compared to abdominal hysterectomy.^{8,9} Mean hospital stay was 2.58±0.41 days in the current study. Short hospital stay with quick return to activity is possible because there is no incision, the operation is performed through natural orifice and operation time is shorter.

No cases of wound infection, bladder and ureteric injury were reported in the current study. Eight (7.14%) patients needed blood transfusion and 5 (4.4%) patients had febrile morbidity. Similar results of fewer complications are reported from other studies.^{2,3,8} There were no complications in 65(82.24%) and 28(84.84%) of patients in whom vaginal hysterectomy was performed for uterine prolapse and non-descent vaginal hysterectomy, respectively. The reason may be that NDVH was done by an experienced consultant trained in the procedure. Other studies of NDVH also show no complications in 90-92% of patients with mean operating time of 61.2±27.89 minutes and need for blood transfusion in 2-4% of patients.¹⁰ Vaginal hysterectomy is generally performed for uterine prolapse in majority of setups. The results of the current study are encouraging and suggest that vaginal hysterectomy can be done safely in well-supported uterus. It is especially important in low- to middle- income countries, where LH cannot be opted in majority of the cases.

The lower rate of vaginal hysterectomy globally is alarming despite being recommended for benign condition of uterus even in the absence of uterine prolapse. The preference is mainly due to lack of experience in performing vaginal hysterectomy especially in patients without prolapse. This highlights the fundamental problem currently faced in clinical gynaecology where junior surgeons are not being trained in the skill of vaginal hysterectomy. So, there is a need to improve training in the best interest of the patient. The selection of route for hysterectomy should not be according to the choice of the surgeon, rather it should be based on the best available evidence. Training in vaginal surgery should be an integral part of the residency programme. Proper plans of workshops, training and retraining of young consultants should be made for encouraging hands on training in this surgical approach. These efforts would definitely ensure qualified gynaecologists with skills and proficiency in vaginal hysterectomy.

Authors' Contributions

TW: Conceived idea, design, writing, editing, responsible for integrity of research.

Limitations of the study: It was a single centre study with estimation of short-term morbidity. There were fewer patients of NDVH. It is suggested that multi-centre studies with a large number of patients and follow-up be carried out so that greater evidence of short- and long-term morbidity can be generated for better patient care.

Conclusion

A declining trend of vaginal hysterectomy was observed during the study period. Vaginal hysterectomy is a safe option for uterine prolapse and non-descent uterus with fewer complications.

Disclaimer: None to declare.

Conflict of Interest: None to declare.

Source of Funding: None to declare.

References

1. Matteson KA, Butts SF. Choosing the route of hysterectomy for benign disease. Committee opinion No.701. *Obstet Gynaecol.* 2017;129:155-9. doi: 10.1097/AOG.0000000000002112.
2. Chrysostomou A, Djokovic D, Edridge W, van Herendael BJ. Evidence based guideline for vaginal hysterectomy of the International Society for Gynaecologic Endoscopy (ISGE). *Eur J Obstet Gynaecol Reprod Biol.* 2018; 231:262-7.
3. Sivapragasam V, Rengasamy CK, Patil AB. An audit of hysterectomies: indications, complications and clinic pathological analysis of hysterectomy specimens in a tertiary care centre. *Int J Reprod Contracept Obstet Gynaecol.* 2018; 7:3689-94.
4. Kim H S, Koo Y J, Lee D H. Clinical outcomes of hysterectomy for benign diseases in the female genital tract: six-year experience in a single institute. *Yeungnam Univ J Med.* 2020; 37:308-13.
5. Lee SH, Oh SR, Cho YJ, Han M, Park JW, Kim SJ, et al. Comparison of vaginal hysterectomy and laparoscopic hysterectomy: A systematic review and meta-analysis. *BMC Women's Health.* 2019; 19:83. DOI: 10.1186/s12905-019-0784-4
6. Lycke KD, Kahlert J, Damgaard R, Mogensen O, Hammer A. Trends in Hysterectomy Incidence Rates During 2000-2015 in Denmark: Shifting from Abdominal to Minimally Invasive Surgical Procedures. *Clin Epidemiol.* 2021; 13:407-16. doi: 10.2147/CLEP.S300394.
7. Igbodike EP, Adepiti CA, Ubom AE, Ajenifuja KO, Loto OM, Fasubaa OB, et al. Trends in vaginal hysterectomy in a Nigerian teaching hospital: A 14-year review. *Trop J Obstet Gynaecol.* 2020; 37:160-6. DOI: 10.4103/TJOG.TJOG_20_20
8. Chen B, Ren DP, Li JX, Li CD. Comparison of vaginal and abdominal hysterectomy: A prospective non-randomised trial. *Pak J Med Sci.* 2014; 30:875-9. doi: 10.12669/pjms.304.4436.
9. Aarts JW, Nieboer TE, Johnson N, Tavender E, Garry R, Mol BW, et al. Surgical approach to hysterectomy for benign gynaecological disease. *Cochrane Database Syst Rev.* 2015; 2015:CD003677. DOI: 10.1002/14651858.CD003677.pub5
10. Somani P,S Priyanka, S Mangala. Non descent vaginal hysterectomy surgery associated with less complications and good prognosis. *Asian J Med Sci.* 2022; 13:123-8. DOI: https://doi.org/10.3126/ajms.v13i1.40294.

GR & TN: Editing, review, final approval.

JZ & SI: Data collection, statistical analysis.