

## Non-decent Vaginal Hysterectomy in Rural Setup of MP: A Poor Acceptance

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### About the Author



**Dr. Sapna Jain** completed her M.D. from prestigious Seth G.S. Medical College KEM Hospital, Mumbai, in 1998 and after that she is continuing private practice, serving the various districts of Madhya Pradesh. She had gone to Bassildon University Hospital, UK, and Bronx, New York, USA for training in urogynaecology and endoscopy. Her special areas of interest are NDVH/Scarless hysterectomy, promotion of natural birthing, autologous stem cells therapy for infertility hypoplastic uterus and chronic cervicitis condemns cord cell banking. She presented papers in various conferences and CME, two publications in international journals and currently working as an assistant professor in L.N. Medical College, Bhopal, M.P.

### Abstract

**Objective** NDVH is a minimally invasive, safe, effective, and economical surgery. Still AH is preferred for benign gynaecological indications. Our study aims to promote NDVH in all technically possible cases by adequate counselling of the patient.

**Methods** This prospective observational study enrolled 100 women seeking hysterectomy for benign gynaecological conditions (excluding prolapse) in a teaching hospital.

Women were counselled on the basis of 'PREPARED' questionnaire to assess their awareness about NDVH and were offered NDVH as the proposed surgery and result is analysed.

**Results** We observed that there was a little awareness about NDVH and its outcome among the subjects. Ten out of 100 patients refused to perform NDVH after counselling and underwent TAH. Rest of the 90 patients opted for NDVH. Forty out of 90 patients were aware about NDVH, but they were sceptical about the outcome, and 50 were totally unaware. After applying 'PREPARED' questionnaire and counselling, we could motivate them to accept NDVH. It was successful in all cases except one where laparotomy was done for ovarian artery retraction. With no significant post-operative complications, early return to routine activity and low cost of surgery, all patients were satisfied with surgical outcome and improved quality of life.

**Conclusion** We conclude that patients accept the surgery with open mind after proper counselling and detailing of

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the procedure. Most of the abdominal hysterectomy can be converted successfully to NDVH in technically feasible cases by experienced hands so adequate training to gynaecology residents is the need of the time. NDVH is economical to the patient as well as for the healthcare system.

**Keywords** NDVH · Rural · Economic · Counselling · PREPARED

## Introduction

Hysterectomy is a commonly performed major gynaecological surgery. Nowadays a spectrum of approaches is available for performing hysterectomy. The traditional vaginal and abdominal hysterectomies represent the least and most invasive techniques, respectively, whereas the laparoscopic procedures remain in the middle of the spectrum. Abdominal hysterectomy is undoubtedly the most popular with a 70:30 ratio for abdominal versus vaginal route [1, 2]. The VALUE Study [3] suggested that 67 % of surgeons still use the abdominal approach as the operation of choice, particularly when dealing with pelvic pathology or carrying out oophorectomy.

Mostly a route is decided on surgeon's choice or because it has become a routine procedure in that particular institution. The comfort and convenience offered by an abdominal incision also has led to the preponderance of abdominal hysterectomy over other types of hysterectomy. In modern medical standards, arbitrary approach is not justifiable as there are significant differences in the medical and economic outcome of abdominal, laparoscopic and vaginal hysterectomy. So a rational, evidence-based guideline should be opted for the selection of appropriate route of hysterectomy [1, 4] as proved by field testing of SPRS guidelines with improved rate of VH over AH. Moreover, teaching these guidelines during residency training programme showed improvement in residents experience and training in both selection capability as well as performance of the most appropriate and least invasive hysterectomy [1].

It has been asserted by many studies that a scar less surgery in the form of NDVH should be preferred by all surgeons as the primary route for benign cases because in NDVH peritoneum is opened only to a minimal extent, thus making it almost an extra peritoneal surgery with minimal bowel handling and least possibility of post-operative paralytic ileus as compared to AH. The morbidity associated with abdominal incision like infections, dehiscence, evisceration, hernia and discomfort of a scar is also avoided. Decreased post-operative morbidity and early recovery in case of NDVH is due to quick return of bowel

functions, early ambulation, reduced requirement of medication and intravenous fluids. Hence, it is better tolerated by elderly patients, obese and those with associated medical disorders. As reported by SS Sheth in his study of 7324 cases, it was proven beyond doubt that vaginal route is superior to abdominal route [5].

Despite the proven advantages of NDVH, abdominal route is still the preferred route, why? It is less training and familiarisation during residency period leading to lack of enthusiasm for vaginal route among gynaecologists or poor awareness among the public of benefits of this route of hysterectomy due to less marketing [6]. As per our study if gynaecologists take the responsibility of making the patient aware about types, advantages and disadvantages of each and every route of hysterectomy, it will help the patient in selecting the best possible treatment. But it is observed that gynaecologists in clinical practise discuss less about the possible route/options available; hence, most of the patients are not even aware about the vaginal approach and its beneficial outcome. Therefore, this study was planned to provide information to the patients about various routes of hysterectomy, its pros and cons, focussing more on NDVH to help them select what is best for them after counselling and using 'PREPARED' questionnaire to find out the reasons for refusal so that we can improve upon and increase the acceptance and number of NDVH which is proven superior and economical in technically feasible cases [7].

The Institute for Health and Clinical Excellence guidelines, RCOG 2011, UK, states that only real indication necessitating total abdominal hysterectomy is for a uterine size greater than 18 weeks and when women are not being offered full range of available treatment they are being short changed [8]. Benign gynaecological surgery appears to have been neglected, and still total abdominal hysterectomy is acceptable despite there being better techniques available. Women (in the UK at least) are almost certainly not being offered the full range of available treatment and are being 'short changed' (67 % abdominal hysterectomy). CREST study [9] conducted by CDC advocates that women who underwent vaginal hysterectomy experienced significantly fewer complications than women who had undergone abdominal hysterectomy with less febrile morbidity, bleeding requiring transfusion, hospitalisation and convalescence than abdominal hysterectomy. Vaginal hysterectomy with prophylactic antibiotics should be strongly considered for those women of reproductive age for whom either surgical approach is clinically appropriate. For the relative contraindications to vaginal hysterectomy such as restricted mobility, large size of the uterus, concurrent procedures, nulliparity and previous surgeries, the application of scoring system developed by Alokanda et al. [10] can help in deciding the

feasibility of NDVH. An analysis for cost between abdominal, LAVH and vaginal hysterectomy by Ransom [11] revealed that vaginal hysterectomy was significantly more cost effective. In our study also, reduced cost was due to less number of suture materials used, reduced medication and hospital stay. Each patient should receive the best possible treatment at the reasonable cost; hence, our study confirms that NDVH is a better option especially in rural setup with limited resources.

## Methods

This prospective observational study of 8 months was conducted in a tertiary care hospital of M.P where the patients come from rural areas. We enrolled 100 women aged 35–55, seeking hysterectomy for various benign gynaecological conditions. We screened them on the basis of preset inclusion and exclusion criteria.

Inclusion criteria were mobile uterus of less than 12–14 week size with adequate vaginal access and non-prolapsed uterus.

Exclusion criteria were uterine size more than 14 weeks, any degree of uterine descent, restricted mobility of uterus, adnexal pathology and genital malignancy.

Women were counselled on the basis of a sequential questionnaire, i.e. {PREPARED} (Procedure, Preferences, Reason, Expectation, Performance, Alternatives, Risk, Expenses, Decision) to assess their awareness about NDVH. After listening to their heard experiences on hysterectomy, we offered them NDVH as the route of surgery. Every relevant detail about the procedure was provided, and all their doubts were clarified. After anaesthesia and medical fitness, written and informed consent was taken. Then patients were subjected to NDVH. All surgeries were done by consultants well experienced with NDVH. Pre-operative preparation was the same as for any major gynaecological surgery including preoperative prophylactic antibiotics in the form of injection Taxim 1 gm iv, 1 h before the surgery. All cases were done under regional anaesthesia. Time taken during surgery was calculated from the start of placement of labial stitches and till the placement of vaginal pack. Intra-operative blood loss was calculated by noting the weight of mops used during surgery and adding with blood in the suction apparatus. Intra-operative findings and intra-operative complications were recorded. Post-operative evaluation comprised of monitoring vitals, appearance of bowel sounds, ambulation, pain scoring, noting complications if any, days of hospital stay, return to routine activity and level of satisfaction clinically and non-clinically, i.e. cost. Any late complications were noted on follow-up visits to OPD. The statistical analysis was done by using SPSS software version 17. The data

were analysed statistically by calculating the descriptive statistics viz., mean, SD, percentages and 95 % confidence interval for all continuous variables. The difference in mean is tested using independent sample Student's *t* test and the measures of association between the qualitative variables are assessed using Chi-square test. The inference is considered statistically significant wherever  $p < 0.05$ .

## Results

We observed that there was very little awareness about NDVH and its outcome among the subjects well comparable with the study by Sharma et al. [12] and Amarjeet et al. [13]. In our study out of 100 patients, ten were adamant and refused NDVH and underwent TAH. Rest of the 90 patients underwent NDVH. Out of these 90 subjects, 40 were aware about NDVH, but they were sceptical about the route and outcome. Rest of the 50 patients were totally unaware about the procedure. After using the PREPARED questionnaire and counselling, we could motivate them to accept NDVH as the proposed surgery. NDVH was successful in all cases but one where laparotomy was done for ovarian artery retraction. The mean age of patients in our study was 44.4. Mean parity was 2.81. Oophorectomy was done in 9.8 % cases. The most common indication for NDVH in our study was DUB (45.33 %) followed by leiomyoma (21.23 %) Mean time taken was 48.41 min. Mean blood loss was 171.32 ml. Appearance of bowel sounds was noted from 6 h onwards. Minimal analgesia was required after 48 h. Catheter and vaginal pack were removed within 24 h. Early ambulation was advised and noted. Mean hospital stay was 3.88 days. Post-operative febrile illness was observed in two patients. Mild blood stained discharge was noted in three patients. With no other significant post-operative complications, early return to routine activity and low cost of surgery, all patients were satisfied with surgical outcome. While interacting with the patients on their post-operative experience on follow-up visits, we were delighted to know that majority of patients were fully satisfied with the procedure and stated that their experience was far better than they expected and will recommend the procedure to others. Standardised procedural analysis using this sequential questionnaire had shown to improve healthcare outcome, satisfaction and quality of life among patients by facilitating their choice and building up confidence.

## Discussion

We conducted this study among rural women of M.P requiring hysterectomy for various indications. With the objective that if proper counselling [6] and information is

provided to the patients regarding the procedure, then they do opt for the best for themselves with conviction. As in our study ten patients refused for NDVH and opted AH even after counselling, they were of opinion that AH is a commonly done, time tested procedure as told by others experiences. For them, NDVH appeared new and little mysterious as abdomen is not opened traditionally. So they had the fear of leaving some pathology inside. Also they were sceptical about results in terms of safety and long-term consequences like return to routine work, squatting, weight lifting and sexual functions.

We found that majority of patients from our rural setup were not aware of this hysterectomy route and had lots of misconceptions and preconceived notions like difficulty in squatting, doing heavy work and sexual life after recovery. But after a good counselling [14] and explanation about the procedure, type of anaesthesia, time taken for surgery, economy and its similarity with normal delivery, we were able to mitigate their myths and fear and convinced them for opting NDVH. With adequate vaginal access, good uterine mobility and technical skill most of the uterus could be removed safely vaginally without any scar. Its advantages being early ambulation, early oral feeds, going to the toilet the very next day, less complications, and no expensive equipments and machines required. It was observed that the cost of care includes not only the medications and surgical fees, but also the productive work day lost [15]. Hence, NDVH is a better choice in rural perspective where women are employed in various activities on daily wages.

In our study, the main reason behind poor awareness was less number of NDVH being performed and secondly patients were not being discussed about the alternative procedures. Causes of underutilisation of VH as noticed by Moen et al. [6] were less surgical training in residency, poor maintenance of surgical skills in practice and less marketing and awareness of alternative hysterectomy techniques. Among these three factors, we found that poor familiarity among patients as well as surgeons was the key factor for the lack of popularity of NDVH. This was also observed by Dorsey et al. [16] and Rogo et al. [17]. Majority of rural women being illiterate were ignorant about a vaginal surgery but on being counselled; they willingly accepted the procedure with open mind and outcome was better than they expected because pain and disturbance in daily routine was their chief concern. But their post-surgical experience was excellent because pain lasted only for 2, 3 days and with early ambulation and early recovery, they were able to carry out their routine activities soon after the surgery.

The mean age of patients in our study was 44.4. Of them 8.2 per cent were post-menopausal. Mean parity was 2.81. Parity over three had some degree of laxity which

facilitated vaginal surgery. We successfully operated on two nullipara patients without much difficulty. Tohic et al. [18] reported success rate was 92.1 % in his 300 cases of NDVH with 72.5 % nulliparous. Agostine [19] showed a 96 % success rate in performing VH in nulliparous women.

In our study, oophorectomy was successfully done in 9.8 % cases. Performing salpingo-oophorectomy concurrently did not prove as a contraindication for NDVH as also reported by ACOG [4].

Seven patients had a history of prior LSCS. We could successfully perform NDVH separating bladder by lateral surgical window [20] discovered by SS Sheth with ease and without any complications. Hence, prior LSCS was also not a contraindication as experienced by Khugh [21] using surgical window for previous caesarean cases for NDVH in his study.

Uterus up to 12 week size could be easily removed without using any debulking measures. For larger size uterus, previous abdominal surgery, limited mobility or for the beginners, the concept of “Trial vaginal hysterectomy” [22] should be followed. Trial VH is like “Trial of forceps” in obstetrics with laparotomy kept stand by, as advocated by Shirish S Sheth, the pioneer and supporter of NDVH in India.

The most common indication for NDVH in our study was dysfunctional uterine bleeding (45.33 %) followed by leiomyoma (21.23 %). Dysfunctional uterine bleeding is universally acknowledged indication for VH [5].

Mean time taken was 48.41 min. However, little longer time was taken for operating on previous LSCS cases and in those with larger uteri. Mean blood loss was 171.32 ml. There was no requirement of blood transfusion in any of our patients. Mean hospital stay was 3.88 days. Though most patients were fit for discharge on 3rd post-operative day, we made them to stay a few days extra as they came from remote areas where chances of immediate follow-up visit were less. In a study by Pradeep et al. [23], mean duration of hospital stay in NDVH group was 1.2 days, whereas it was 4.3 days for TAH group. VH is associated with significant benefits in terms of reduced hospital stay, improved patient recovery and return to work [24]. We did not have any major intra-operative or post-operative complications. Post-operative febrile illness was observed in two patients. Mild blood stained discharge was noted in three patients.

Post-operative experience and satisfaction are a subjective phenomenon. Through the PREPARED questionnaire, we could conclude that all the patients were satisfied with the clinical and non-clinical outcome, i.e. better quality of life at economical cost similar to Silva Filho in his study [25]. This enforces that emotional experiences influence healthcare utilisation and in turn selection of a proposed surgery.



There are mounting evidence of studies including Cochrane review [26] in support of NDVH as a preferred method with speedy return to normal activities, fewer febrile episodes and shorter duration of hospital stay. Because of equal or significantly better outcomes on all parameters, VH should be performed in preference to AH and LH wherever possible where VH is not possible, LH may avoid the need for AH. This study shows that greater patient involvement in healthcare decision making, results in improved satisfaction and better outcome.

## Conclusion

Worldwide the commonest performed surgery hysterectomy on women is unique in the sense that uterus can be removed either by abdominal incision or by *vias naturales*, i.e. the natural opening provided by the vagina. Hence while deciding the route and method of hysterectomy, physician has to discuss all the available options with patients and consider a procedure which has quality, safety and cost-effectiveness to fulfil the medical needs of the patient [6]. To achieve that, it is essential to upgrade the knowledge, attitude and acceptance of patient as well as the gynaecologist. Our study proves that complete knowledge about the surgery to the patient, proper counselling and motivation changes the attitude of the patients towards acceptance of newer alternatives in medicine and it is ethically acceptable and effective method of favourable outcome.

Study highlights the importance of minimal invasive hysterectomy techniques for the welfare of rural Indian women at low resource setting. NDVH fulfils all the criteria for minimal invasive surgery as it employs a natural orifice thereby avoiding an abdominal scar and the vagina becomes a new trocar port site permitting easy dissection and removal of uterus, hence early recovery and discharge [27].

Study also emphasises on training of budding gynaecologist to learn this signature gynaecological surgery. It is a simple but challenging procedure. If learned properly, it instils confidence in surgeons to undertake this procedure routinely in all technically feasible cases. Ocheke et al. [28] also concluded that resident's inadequate exposure and training of vaginal hysterectomy may have potential implications on future proficiency to perform this method of surgery that has documented advantages in the best interest of patients.

## Compliance with Ethical Standards

**Conflict of interest** The authors of the article Sapna B. Jain and Kshma D. Chandrakar declare that they have no conflict of interest.

**Human Rights and Ethical Statements** All procedures followed were in compliance with the ethical requirements of this journal.

**Informed Consent** Written informed consent was taken from the subjects.

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