

Changing routes of hysterectomy : a cross sectional and comparative study

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ABSTRACT

Hysterectomy is one of the most frequently performed major surgical procedure in women. Traditionally, the uterus has been removed either by abdominal or vaginal route. In spite of the recommendations in favor of vaginal hysterectomy majority of the hysterectomies are still done by the means of abdominal route and vaginal route is utilized mostly for prolapsed uterus. This study was done to see the current trend of routes of hysterectomy for benign condition at Kathmandu Medical College Teaching Hospital and its indication. This was a cross-sectional and comparative study done for 24 months (Jan 2008- Dec 2009). Data for the year 2009 was collected prospectively and for the year 2008 case notes of all the cases of hysterectomy was reviewed. Total 317 cases of hysterectomy were done for benign condition in KMCTH during the 2 year study period. Of the 317 cases 124 was done during the year 2008 and 193 during 2009. Three major route namely vaginal hysterectomy (VH), Abdominal Hysterectomy (AH), and Laparoscopic hysterectomy (LH) was utilized for performing hysterectomy. Major indication for hysterectomy was pelvic organ prolapse (POP) followed by abnormal uterine bleeding (AUB), and fibroid uterus during both the years. Route of hysterectomy in the cases with non prolapsed pelvic organ were AH (94.0%) and LH (6.0%) during the year 2008 and VH (6.0%), AH (76%) and LH (18.0%) during the year 2009. Major indications for hysterectomy are POP, AUB, and fibroid uterus. VH is mainly done for the cases of POP. AH is still the major route for indications other than POP. Minimally invasive approach like VH for non descent uterus and LH although is rising needs to be practiced more.

Keywords: Routes of hysterectomy, laparoscopic hysterectomy, abdominal hysterectomy, vaginal hysterectomy.

INTRODUCTION

Hysterectomy is, after Caesarean delivery, one of the most frequently performed major surgical procedure in women.¹ Traditionally, the uterus has been removed either by abdominal or vaginal route. Laparoscopic assisted vaginal hysterectomy gained its popularity in 1990s and gynecologist in developed country started opting for laparoscopic hysterectomy (LH) in the place of abdominal hysterectomy (AH).² New approaches like total laparoscopic hysterectomy and robotic-assisted vaginal hysterectomy have also emerged in recent days.^{3,4} In a recent meta-analysis to evaluate the most appropriate approach to hysterectomy 27 trials were reviewed.⁵ This meta-analysis on the basis of significant speedier return to normal activities and improvements in terms of other secondary outcomes (shorter duration of hospital stay and fewer unspecified infections or febrile episodes) suggest that vaginal hysterectomy (VH) is preferable to AH, provided it can be performed safely. Where VH is not possible, LH may help to avoid AH, but the former confers a greater chance of bladder or ureteral injury.⁵

A recent Cochrane review of surgical approach for benign gynaecological disease, involving 4495 women

in 34 trials, concluded that the vaginal approach is preferred to the abdominal approach. When vaginal hysterectomy is not possible, laparoscopic hysterectomy may avoid the need for an approach by laparotomy.⁶

ACOG recommendation regarding routes of hysterectomy for benign indications is also similar.⁷

In spite of the recommendations in favor of vaginal hysterectomy majority of the hysterectomies are still done by the means of abdominal route and vaginal route is utilized mostly for prolapsed uterus. Currently in the United States, about 64% of hysterectomies for benign disease are performed abdominally, about 22.0% are performed vaginally, and about 14.0% are performed laparoscopically.⁸ In Sweden nearly 70.0% of the hysterectomy for benign indications are done by abdominal route.⁹

This study was done to see the current trend of route of hysterectomy for benign condition at KMCTH and its indication, to compare the routes of hysterectomy for benign conditions between the year 2008 and 2009, and to find out the proportion of hysterectomy done in a minimally invasive approach.

Table-1: Indications of hysterectomy

Indications	Year 2008 n=124	Year 2009 n=193
POP	59 (47.6%)	68 (35.0%)
AUB	28 (22.6%)	49 (26.0%)
Fibroid	28 (22.6%)	44 (24.0%)
Ovarian cyst	6 (4.8%)	22 (11.0%)
Cx dysplasia	3 (2.4%)	6 (2.2%)
Others	X	4 (1.8%)

MATERIALS AND METHODS

This was a Cross sectional and comparative study done in the department of Obstetrics and gynaecology, KMCTH for the period of 24 months from January 2008 to December 2009. Data for year 2009 was collected prospectively and for the year 2008 charts of the cases of hysterectomy were reviewed. Cases of hysterectomy done for malignancy and emergency obstetric hysterectomy were excluded from the study as these indications mandate abdominal route. For each cases of hysterectomy done for benign condition data were collected on characteristics like age, indication of hysterectomy, and route of hysterectomy. Data were entered into a computer database using Microsoft Excel spreadsheet and statistical analysis was performed. Results are presented as frequencies, percentages and descriptive statistics.

RESULTS

Total hysterectomy for benign indication during the 24 months study period was 317.

Out of this 124 was done in the year 2008 and 193 in the year 2009. Three major route namely vaginal hysterectomy (VH), Abdominal Hysterectomy (AH), and Laparoscopic hysterectomy (LH) was utilized for performing hysterectomy. Mean age for AH was 46.33 years, for VH- 57.22 years, and LH- 46.41 years. Major indication of hysterectomy was pelvic organ prolapse (POP), abnormal uterine bleeding (AUB), and fibroid uterus (Table-1).

Route of hysterectomy in majority of the cases were AH followed closely by VH during both the years. All of the VH during the year 2008 were for POP, and most of the

VH during the year 2009 also was for POP. Total number of cases operated by LH increased in 2009 (Table-2).

Routes of hysterectomy for indication other than prolapse in year 2008 were mainly AH (94.0%) and LH was done only in 4 cases (6.0%). In the year 2009 non descent VH was also done in addition to the AH and LH.

Route of hysterectomy in the 125 cases with conditions other than prolapse in year 2009 were VH in 8, AH in 94, and LH in 23 (Table-3).

Minimally invasive surgery (MIS) like non descent VH and LH was done only in 6.0% of the cases during the year 2008 (Fig. 1). The proportion of MIS increased to 25.0% during the year 2009 (Fig. 2).

DISCUSSION

This study shows that majority of the hysterectomy was done for the pelvic organ prolapse, followed by abnormal uterine bleeding, and fibroid uterus. The indication for hysterectomy in developed countries like USA and European countries are mainly fibroid uterus, dysfunctional uterine bleeding, endometriosis and pelvic pain and only a small percentage of hysterectomies are performed for pelvic organ prolapse.^{10,11} The difference in the indication can be explained by the fact that Nepal has a very high prevalence POP.¹² Second commonest indication for hysterectomy in this study was abnormal uterine bleeding as alternative modalities of treatment for menorrhagia like endometrial ablation, and Uterine artery embolization are not practiced in Nepal.

During the study period routes of hysterectomy was mainly AH (49.0%), VH (42.0%), and LH (9.0%). Majority of the VH was done for POP.

In the indication other than POP 82.0% of the hysterectomy was AH, 14.0% was LH and only 4.0% was VH. This trend in route of hysterectomy for benign indications are similar to the trend in developed country like USA where 64.0% of the hysterectomy are AH, 22.0% VH, and 14.0% LH.⁸ In Sweden 80.0% of the hysterectomy done for benign indication are AH.

In the year 2008 VH was done only for prolapsed uterus, and majority of the non prolapsed uterus was operated via abdominal route. This trend reflects the mindset of

Table-2: Routes of hysterectomy

Routes	Year 2008	Year 2009	Total
VH	57 (46.0%)	76 (40.0%)	133 (42.0%)
AH	63 (50.8%)	94 (48.0%)	157 (49.0%)
LH	4 (3.2%)	23(12.0%)	27 (9.0%)
Total	124 (100%)	193 (100%)	317 (100%)

Table-3: Routes of hysterectomy-non descent uterus

Routes	Year 2008	Year 2009	Total
VH	x	8 (6.0%)	8 (4.0%)
AH	63 (94.0%)	94 (76.0%)	157 (82.0%)
LH	4 (6.0%)	23 (18.0%)	27 (14.0%)
Total	67 (100%)	125 (100%)	192 (100%)

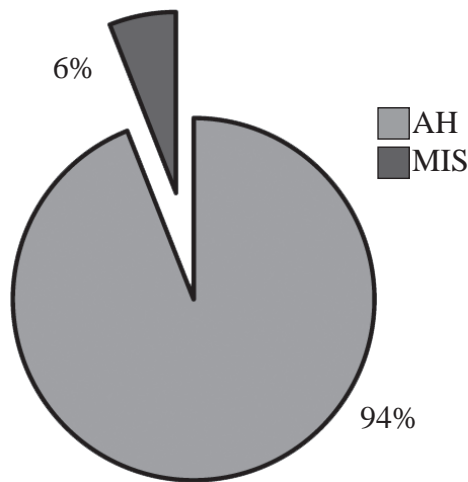


Fig. 1. Minimally Invasive Surgery-2008

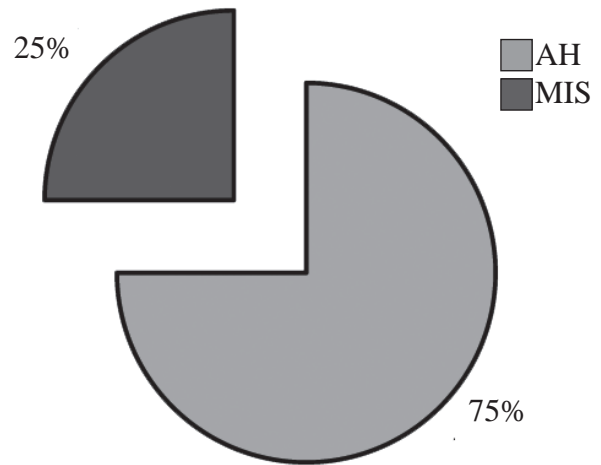


Fig. 2. Minimally Invasive Surgery-2009

the gynecologist who are trained to do VH only for POP. However, in the year 2009, VH was introduced also for the non prolapsed uterus. The reason behind this change in attitude is increasing experience with LH which gave surgeons the skill and confidence to do VH even for non prolapsed uterus. In recent times large volume of data are available on the feasibility of removing a nonprolapsed uterus vaginally.¹³⁻¹⁵

All the traditional contraindication like vaginal narrowing, inaccessibility of the uterus,

Lack of uterine descent, larger uterine volume, nulliparity, and previous cesarean delivery are no longer considered as contraindication for vaginal hysterectomy. In our experience even during our initial phase of nondescent vaginal hysterectomy we have managed to do successful vaginal hysterectomy for large fibroid uterus with uterine size upto 20 weeks size, nulliparous uteri, and with history of previous cesarean delivery.

Most of the current recommendation favor minimally invasive surgery like VH over AH.⁵⁻⁷ In the developing country like Nepal feasibility and acceptability of non descent VH should be high as this procedure does not require expensive instruments and learning curve of this procedure is very short.¹³ It will also prove economical for the low resource country like Nepal. To increase the percentage of hysterectomy done by minimally invasive route like VH, making vaginal route as norm when planning hysterectomy for benign indication can be useful. This approach has been proven effective in a study done by Varma *et al* where rate of vaginal hysterectomy increased from 32.0-95.0% in just five years time.¹³

Major indication for hysterectomy was POP, AUB, and Fibroid uterus. AH was the major route of hysterectomy for indication other than prolapse. VH was typically utilized for pelvic organ prolapse. Trend is rising towards minimally invasive approach like non descent VH and LH.

VH is the least invasive approach to hysterectomy, and its use should be encouraged as the preferred MIS (minimally invasive surgery) option for women requiring hysterectomy for benign conditions.

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