



## Vaginal versus abdominal hysterectomy for the enlarged non-prolapsed uterus: a retrospective cohort study



Kavi Fatania<sup>a</sup>, Mathew Vithayathil<sup>a</sup>, Peter Newbold<sup>b</sup>, Wai Yoong<sup>b,\*</sup>

<sup>a</sup>4th Year Medical Students, UCL School of Medicine, Gower Street, London, UK

<sup>b</sup>Department of Obstetrics and Gynaecology, North Middlesex University Hospital, London, UK

### ARTICLE INFO

#### Article history:

Received 25 June 2013

Received in revised form 4 December 2013

Accepted 4 December 2013

#### Keywords:

Vaginal hysterectomy  
Uterine size

### ABSTRACT

**Objective:** To compare surgical outcomes in women with enlarged uteri >12 weeks' size who underwent vaginal hysterectomy compared to abdominal hysterectomy for non-prolapse indications.

**Study design:** Retrospective cohort study performed between 2007 and 2012 in a North London teaching hospital. The study group comprised 39 women who had vaginal hysterectomy (VH) with uteri >12 weeks size (200 g) for non-prolapse indications. The next successive total abdominal hysterectomy (TAH) following the index case for similar indications (and with similar uterine weights) served as control ( $n = 33$ ). The groups were compared for pre- and post-operative demographic data, and main outcome measures were estimated blood loss, operation time, length of stay and complications.

**Results:** Both VH and TAH groups had statistically similar pre-operative mean haemoglobin levels, age, body mass index, previous abdominal surgery, and American Society of Anesthesiologists (ASA) grade. Mean uterine weight ( $403.1 \pm 239.5$  vs  $460.5 \pm 236.2$  g) was comparable in both groups (both  $p > 0.05$ ). The mean duration of the procedure was similar ( $123.5 \pm 45.8$  vs  $119.8 \pm 44.9$  min,  $p = 0.580$ ) but women who had TAH lost 117 ml more of blood ( $525.7 \pm 427.6$  vs  $408.2 \pm 411.8$  ml,  $p = 0.039$ ). Although overall complication rates were comparable between the groups (30.8% vs 36.4%,  $p = 0.627$ ), the mean post-operative stay was 55% shorter following VH ( $40.7 \pm 29.4$  vs  $90.7 \pm 46.2$  h,  $p < 0.0001$ ).

**Conclusion:** In women with non-prolapsed uteri >12 weeks' size, VH is a safe and cost effective option. The vaginal route is associated with significantly lower estimated blood loss and 55% shorter post-operative stay, with no increase in complication rates.

© 2014 Elsevier Ireland Ltd. All rights reserved.

## 1. Introduction

Hysterectomy is the most common major gynaecological surgery, with an estimated 600,000 and 100,000 respectively being performed in the USA [1] and the United Kingdom (UK) [2] every year. The American College of Obstetrics and Gynaecology (ACOG) recommends vaginal hysterectomy (VH) as the preferred route [3] for benign pathology, based on a recent meta-analysis from the Cochrane Collaboration [4]. Despite this evidence-based guidance, rates of VH remain low, with abdominal hysterectomy still the preferred approach [5]. There is even greater reluctance for gynaecologists to adopt the vaginal approach for the enlarged uterus >12 weeks size [6], although there are many case reports of uteri up to 20 weeks size being successfully removed vaginally. Furthermore, randomised control trials support the use of VH for

the enlarged uteri compared to abdominal and laparoscopic approaches: Benassi et al. [7], for example, showed that this is associated with shorter operative times and quicker patient recovery when compared to abdominal or laparoscopic [8,9] routes. Additionally, the use of medical [10] and surgical [11,12] debulking techniques can increase the feasibility of the vaginal approach.

The aim of this study was to compare the clinical outcomes of women who had vaginal versus total abdominal hysterectomy (TAH) for enlarged uteri >12 weeks' size.

## 2. Materials and methods

This is a retrospective cohort control study of hysterectomy cases for uteri weighing >200 g (correlating to 12 weeks' uterine size) performed at a North London hospital between 2007 and 2012. The index group comprised 39 VHs for non-prolapse indications with uteri >200 g while the next successive 33 TAH after the index cases (with >200 g uteri) formed the control group. Indications for surgery included menorrhagia, dysmenorrhea,

\* Corresponding author. Tel.: +44 2088872747; fax: +44 2088872732.

E-mail addresses: [wai.yoong@nmh.nhs.uk](mailto:wai.yoong@nmh.nhs.uk), [wyoong77@hotmail.com](mailto:wyoong77@hotmail.com) (W. Yoong).

pressure symptoms, endometrial hyperplasia/post-menopausal bleeding and urinary symptoms: all cases of malignancy and prolapse were excluded. All VH cases were either performed or supervised by three experienced vaginal surgeons, while TAH cases were similarly conducted or supervised by two experienced gynaecologists: the mean number of years as consultant in both groups were comparable (7.2 vs 7.6 yrs;  $p > 0.05$ ).

Pre-operative demographic parameters compared included age, body mass index (BMI), ethnicity, parity, haemoglobin concentration and previous abdominal surgery. Post-operative outcome measures included operative time (from anaesthetic induction to extubation), estimated blood loss (based on gauze weight and visual blood volume estimation), length of stay (LOS) and complication rates.

Intra-operative complications recorded included major blood vessel or organ injury (including bowel, bladder and ureter) and estimated blood loss of  $>500$  ml (also determined as either patient experiencing symptoms or need for blood transfusion).

Post-operative complications were: hospital readmission; return to theatre; pelvic or vault haematoma, pelvic infection, urinary tract infection and thromboembolic disease.

All continuous parametric data were statistically analysed using independent two-tailed  $t$  test and a  $p$  value of  $<0.05$  was taken to indicate significance. Non-parametric data were analysed with the Mann–Whitney test. Categorical data were analysed using Fisher's Exact test.

### 3. Results

Retrospective data were collected from the clinical notes of the study ( $n = 39$ ) and control groups ( $n = 33$ ). The index and control groups had statistically comparable mean age (47.9 vs 47.8 years), BMI (29.9 vs 29.1 g/m<sup>2</sup>), American Society of Anesthesiologists (ASA) grade (1.8 vs 1.6), pre-operative haemoglobin concentration (12.3 vs 12.2 g/dl), previous abdominal surgery (48.7% vs 66.7%) and histological uterine weight (403.1 vs 460.5 g) ( $p > 0.05$  in all cases). Women who underwent TAH were four times more likely to have had more than one previous caesarean section (CS) (48.5% TAH vs 12.8% VH,  $p = 0.0015$ ).

Women who underwent VH had a significantly higher mean parity (2.8 vs 1.7,  $p = 0.0019$ ), and were twice as likely to have received pre-operative GnRH analogue to medically debulk the uterus (46.2% vs 21.2%,  $p = 0.046$ ) than the women in the control group (Table 1): 5.1% of women undergoing VH, compared with 33.3% in the TAH group, were nulliparous ( $p = 0.0042$ ).

There was no statistically significant difference in indications for surgery between the two groups (Table 2), with menorrhagia being the most common cause for hysterectomy (92.3% VH vs 87.9% TAH;  $p > 0.05$ ). The mean duration of surgery (123.5 vs 119.8 min) and number of women having concomitant salpingo-oophorectomy (30.8% vs 12.1%) were not statistically different between the groups ( $p > 0.05$  in both cases). However, estimated intra-operative blood loss was significantly greater in the TAH group (527.5 vs 408.2 ml,  $p = 0.039$ ), as was the LOS (90.7 vs 40.7 h,  $p < 0.0001$ ) (Table 3).

The rate of patients with at least one complication was similar in both groups (23.1% vs 27.3%). The most frequent serious complication in the VH group was vault and/or pelvic haematoma, which occurred in 7.7% of cases, followed by anaemia requiring blood transfusion, which occurred respectively in 5.1% of VH cases (Table 4). In the TAH group, anaemia requiring blood transfusion was the most common serious complication (18.1%); furthermore, two women in this group (6.1%) suffered from wound complications, one of which required surgical debridement, lengthening her stay.

**Table 1**  
Comparison of patient demographic variables.

	VH (n=39)	TAH (n=33)	p value
Age (y)			
Mean $\pm$ SD	47.9 $\pm$ 4.6	47.8 $\pm$ 7.3	NS
Range	39–57	29–74	
BMI (kg/m <sup>2</sup> )			
Mean $\pm$ SD	29.9 $\pm$ 6.3	29.1 $\pm$ 5.1	NS
Range	22–48	21.4–41.1	
Parity			
Mean $\pm$ SD	2.8 $\pm$ 1.3	1.7 $\pm$ 1.6	0.0019
Range	0–5	0–5	
Previous abdominal surgery (%)	48.7	66.7	NS
ASA grade			
Mean $\pm$ SD	1.8 $\pm$ 0.5	1.6 $\pm$ 0.6	NS
Range	1–3	1–3	
Pre-operative Hb concentration (g/dL)			
Mean $\pm$ SD	12.3 $\pm$ 1.6	12.2 $\pm$ 1.3	NS
Range	8.7–15.5	9–14.2	
Pre-operative GnRH analogue (%)	46.2	21.2	0.046
Uterine weight (g)			
Mean $\pm$ SD	403.1 $\pm$ 239.5	460.5 $\pm$ 236.2	NS
Range	215–1200	230–1175	

<sup>a</sup> Mann–Whitney  $U$  test used for continuous data, and Fisher's exact test for discrete data.  $p$  values  $> 0.05$  were considered not significant (NS).

**Table 2**  
Indications for surgery.

Indication <sup>a</sup>	VH (n=39)		TAH (n=33)		Statistical significance <sup>b</sup>
	No.	%	No.	%	
Menorrhagia	36	92.3	29	87.9	NS
Dysmenorrhoea	3	7.7	9	27.3	NS
Pelvic pain or dyspareunia	4	10.3	2	6.1	NS
Post menopausal bleeding	0	0.0	2	6.1	NS
Pressure symptoms	1	2.6	2	6.1	NS
Prolapse	3	7.7	0	0.0	NS
Urinary symptoms	3	7.7	0	0.0	NS

<sup>a</sup> Patients may have had  $>1$  indication for surgery.

<sup>b</sup> By Fisher's exact test.

**Table 3**  
Surgical outcomes of VH vs TAH.

Outcome measure	VH (n=39)	TAH (n=33)	Statistical significance <sup>a</sup>
Operative time (min)			
Mean $\pm$ SD	123.5 $\pm$ 45.8	119.8 $\pm$ 44.9	NS
Range	38–240	50–230	
Estimated blood loss (ml)			
Mean $\pm$ SD	408.2 $\pm$ 411.8	525.7 $\pm$ 427.6	$p = 0.039$
Range	30–1500	100–2000	
Adnexectomy performed (%)	30.8	12.1	NS
Morcellation used (%)	84.6	12.1	$<0.0001$
Length of stay (h)			
Mean $\pm$ SD	40.7 $\pm$ 29.4	90.7 $\pm$ 46.2	$<0.0001$
Range	1–142	50–291	

<sup>a</sup> Mann–Whitney  $U$  test used for continuous data, and Fisher's exact test for discrete data.  $p$  values  $> 0.05$  were considered not significant (NS).

Download English Version:

<https://daneshyari.com/en/article/3919810>

Download Persian Version:

<https://daneshyari.com/article/3919810>

[Daneshyari.com](https://daneshyari.com)