

# Postoperative Morbidity Following Vaginal Hysterectomy for Uterovaginal Prolapse and its Correlation with Vault Hematoma

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**OBJECTIVE** – To find out the presence of postoperative vault hematoma and its relation to postoperative morbidity if any. **METHOD** – A total of 100 postoperative cases of vaginal hysterectomy for uterovaginal prolapse were subjected to sonography on 4<sup>th</sup> postoperative day. **RESULTS** – The incidence of vault hematoma was 6% and in these patients, 16.67% (1/6) had fever while only 1.06% (1/94) of cases without vault hematoma suffered from fever. Out of all women having vault hematoma, 66.67% (4/6) had small size hematoma and 33.33% (2/6) had medium size hematoma. There was no large hematoma. Fifty percent of patients (1/2) with medium size hematoma as compared to only 25% (1/4) with small size hematoma suffered from febrile morbidity. As the number of patients was less in hematoma group, results were not statistically significant. There was no difference in the mean hemoglobin group, postoperative stay and operative time in the two groups. None of the patients required re-admission for any postoperative problem. **CONCLUSION** – Ultrasound detection of vault hematoma does not add to the postoperative care of patients of uterovaginal prolapse where all the pedicles can be extraperitonealised during vaginal hysterectomy. Though febrile morbidity was more in cases with vault hematoma, the number of such patients was too small to be significant.

**Key words :** vaginal hysterectomy, hematoma, postoperative febrile morbidity

## Introduction

Hysterectomy, in spite of many alternative managements, remains the most commonly chosen mode of treatment for many gynecological disorders. Vaginal hysterectomy is preferred by gynecologists for uterovaginal prolapse where anterior colpoorrhaphy and posterior colpoerineorrhaphy can be conveniently performed along with. Currently vaginal route for nondescent uterus has become popular as it has got distinct advantages. This route is associated with less febrile morbidity, less risk of hemorrhage<sup>1</sup>, fewer blood transfusions<sup>2</sup>, shorter hospitalization and quick convalescence<sup>3</sup> as compared to abdominal route.

Even with this procedure some complications like hemorrhage<sup>4</sup>, post operative fever and infection<sup>5,6</sup> have been reported. To predict about the development of these complications, vaginal vault hematoma formation on post operative day 3 or 4 can be studied.

Small collections of fluid which cannot be detected clinically may contribute to febrile morbidity. These may be detected by sonography. Thus, the present study was carried out to find the incidence of vault

hematoma after vaginal hysterectomy and its correlation with postoperative morbidity, if any.

## Material and Method

One hundred postoperative cases of vaginal hysterectomy with pelvic floor repair were studied.

A detailed preoperative profile of patients was noted. Vaginal packing was done with betadine pack for a minimum of three days prior to operation. Perioperative prophylactic antibiotics were administered to all the cases. Amount of blood loss, units of blood transfused and operating time were recorded for every patient.

Postoperative hemoglobin, urine test for microscopy and culture were performed on second postoperative day. Febrile morbidity was defined as :

- (1) Temperature > 37.8°C on any two separate occasions (moderate grade pyrexia).
- (2) Temperature 38.5°C on two consecutive days > 24 hours after surgery (high grade pyrexia).
- (3) Temperature > 37.4°C on at least two days postoperative (low grade pyrexia).

Transvaginal sonography was performed on 4<sup>th</sup> postoperative day. The size of any vault collection (non peristaltic complex echogenic mass) was classified as small if its mean diameter was between 2 and 3.9 cm, medium if between 4 and 5.9 cm and large if 6cm or more.

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Patients were allowed to go home when deemed medically fit and a six week follow up appointment was arranged. Any revisit to the outpatient or emergency department or readmission to the hospital earlier than six weeks was documented with reasons.

### Observations

The cases were divided into two groups. Group I included patients with hematoma larger than 2x2 cm whereas Group II included patients without hematoma.

Age of the patients was comparable in the two groups (Table I).

**Table I : Demographic Profile of Patients**

	Group I (Hematoma n=6)	Group II (No hematoma n=94)
Age (years)	49.66±10.7	53.49± 8.81
Rural	5 (83.3%)	77 (81.9%)
Urban	1 (16.7%)	17 (18.1%)

No significant difference was observed in the mean operative time which was 120 minutes in patients with hematoma and 111.14 minutes in those without hematoma.

It is evident that 16.67% (1/6) patients in group I compared with only 1.06% (1/94) in group II experienced febrile morbidity (Table II). As the number of patients in group I is very small, the difference is not statistically significant. Mean hemoglobin drop and postoperative hospital stay was comparable in the two groups (Table II). None of the patients in either group required readmission to the hospital for any postoperative complications.

**Table II : Summary of Results**

	Group I (n=6)	Group II (n=94)
Febrile morbidity	1 (16.67%)	1 (1.06%)
Cases with Hb drop	5 (83.33%)	86 (91.49%)
Hb drop (g/dl)	1.68 ± 1.37	1.81± 1.13
Blood transfusion	3 (50%)	52(55.32%)
Hospital stay (days)	10.33±2.42	8.77 ± 3.26

According to the size of hematoma, patients were divided into three sub-groups (Table III). Largest percentage of hematomas belonged to small size and it was about two times that of medium size subgroup. Average hemoglobin drop was double in cases of medium size hematoma. Patients with medium size hematoma had average

postoperative stay of about 1.6 times that of patients with small size hematoma. With small size hematoma only one out of four had febrile morbidity whereas with medium size hematoma one out of four had febrile morbidity.

**Table III : Relation Between Postoperative Morbidity and Size of Hematoma**

Sizes	Hematoma Group			Nohematoma Group
	Small	Medium	Large	
Total No.	4	2	0	94
Average 1.125 Hb drop (gm/dl)	2.8	0	1.8	
Mean duration of postoperative hospital stay (days)	8.5	14	0	8.77
Febrile morbidity	1 (25%)	1 (50%)		1 (1.06%)

However as, the total number of patients was very small, these differences were not statistically significant.

### Discussion

The overall incidence of vault hematoma was 6%, four small (66.67%); two medium (33.33%) and no large hematoma were identified. This was in contrast to the studies by Kuhn and De Crespigny<sup>5</sup> and Thomson et al<sup>7</sup> who reported an incidence of 98 percent and 25 percent respectively. The reason may be that the present study had patients who underwent vaginal hysterectomy exclusively for uterovaginal prolapse where pedicles could be brought low to be made extraperitoneal.

In our study no statistical difference was found in the mean duration of postoperative hospital stay in the two groups. These findings are supported by Haines et al<sup>8</sup>. The percentage of hemoglobin drop and the number of patients showing the drop in our study is in total contradiction to the previous studies by Slavotinek et al<sup>6</sup> and Thomson et al<sup>7</sup>.

Postoperative pyrexia was 16 times more common in subjects with hematoma compared to those without. These findings are supported by those of Togliola and Pearlman<sup>9</sup> in whose study 69% of women with postoperative pelvic collection experienced febrile morbidity compared with 12% of those with no collection (p <0.001).

It is evident that the degree of morbidity experienced by women with a small hematoma was comparatively low than that by women with medium size hematoma. These findings are similar to those made by Thomson et al<sup>7</sup>.

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