

## Hysterectomy: an analysis of perioperative and post operative complication

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### Abstract

**Objective:** To document peri operative and post operative complication observed after hysterectomy, regardless of route on the operator. **Material and methods:** A hospital based prospective study was carried out in department of obstetrics and gynaecology, KMCTH Sinamangal for six months. The study was carried out in patients undergoing hysterectomy who were followed from the time of admission to the time of discharge and two weeks thereafter. And followings were noted-Indication; route of hysterectomy, intraoperative and postoperative morbidities during hospital stay and after two weeks of discharge was noted. **Result:** Total number of hysterectomy carried out was 50. 31(62%) were Total abdominal hysterectomy, and 19(38%) were vaginal hysterectomy. Indication for total abdominal hysterectomy were fibroid uterus 12(24%), DUB 8 (16%), CIN 4(8%), chronic cervicitis 1 (2%). II U-V prolapse with previous LSCS 1 (2%), endometriosis 1(2%). Prophylactic for Ca breast 1(2%), Postmenopausal bleeding 1(2%). All cases of vaginal hysterectomy were performed for 2<sup>nd</sup> degree U-V prolapse. Intra operative complication during surgery were two cases of haemorrhage (4%) each in both total abdominal hysterectomy and vaginal hysterectomy. There was one case of bladder injury during abdominal hysterectomy. Postoperative complication noted were febrile morbidity 1(2%) in abdominal hysterectomy. Urinary tract infection remains the single most common febrile morbidity. There was one case of secondary haemorrhage in both type of hysterectomy. One was managed conservatively and other required laprotomy. There were three(6%) cases of wound infection in abdominal hysterectomy of two which were sanguineous discharge and one was frank pus which required secondary suture.

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Hysterectomy is one of the most common surgical procedures performed; after caesarean delivery. The rare of hysterectomy has varies between 6.1-8.6 per 1000 women of all age<sup>1</sup>. Approximately 75% of all hysterectomies are performed on women between ages of 20-40 years<sup>1</sup>.

The majority of potential postoperative complication associated with gynaecological surgery are common to other surgical procedure and represent the complicated response of the body to the stresses imposed by the surgery. In addition there are other complication associated with specific operation itself. Because of the considerable advances in anaesthetic and surgical technique, in addition to post operative management, surgery has become safer and thus operation are being carried out on people who would have been previously considered unsuitable. Every patient must be considered individually to determine whether the proposed operation is appropriate and the anticipated operation benefits the complication<sup>2</sup>.

### *Intraoperative Complication*

Most intraoperative injuries during abdominal hysterectomy can be traced to poor lightning, unsatisfactory assistance, undue haste, anatomic variants, or involvement of the injured organs in the diseased process<sup>1</sup>.

### *Ureteral injury*

Injury to the ureters is one of the most serious complications of hysterectomy because of subsequent renal impairment. Fortunately such injury is uncommon occurring in 0.1-1.5% of all gynaecological surgeries<sup>3</sup>. The risk is lower for vaginal versus abdominal hysterectomy.

### *Bladder Injury*

Because of close anatomical relationship of the bladder uterus and upper vagina, the bladder is the

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segment of the lower urinary tract that is most vulnerable to injury<sup>1</sup>. The incidence of bladder injury is 1-2%<sup>1</sup>. Laproscopic surgery carries a lower rate compared to open surgery<sup>2</sup>.

### **Bowel Injury**

Small bowels are the most common intestinal injuries in gynaecological surgery. Patient suspected with pelvic adhesion or obvious pelvic diseases are excluded as candidates for vaginal hysterectomy, bowel injuries do not often occur, bowel injuries often are associated with performance of posterior-colpoperineorrhaphy and are usually confined to the rectum<sup>1</sup>. It occurs in around 0.3% of vaginal and abdominal hysterectomy<sup>2</sup>. The incidence of bowel damage during laproscopic surgery is 0.5%<sup>2</sup>.

### **Haemorrhage**

Significant arterial bleeding usually arises from the uterine or ovarian arteries. Hysterectomy is associated with a risk of postoperative haemorrhage. This is less with abdominal rather than vaginal procedures. In a series of 223 women who had vaginal hysterectomies 25% were found to have vault haematoma. This was associated with significant increase in febrile morbidity; blood transfusion and increased hospital stay<sup>2</sup>. There is a death rate of approximately 4/100,000 following abdominal hysterectomy and 25/100,000 following vaginal hysterectomy<sup>2</sup>.

### **Post operative complication – Incidence**

Incidence of acute pelvic complication, often abdominal hysterectomy, is 3.9% to 50%. The rate of infection after vaginal hysterectomy is 1.7-64%<sup>3</sup>. It may range from cuff cellulitis to infected vaginal haematoma or cuff abscess, postoperative ovarian abscess, septic pelvic thrombophlebitis to osteomyelitis pubis and wound infection.

### **Wound infection**

Because hysterectomies are classified as clean contaminated operative wounds. Patients have 7.7% wound infection rate based on Cruse and Foords data<sup>3</sup>. Wound infection may be early or late. Early wound infections are characterized by temperature elevation within first 48 hours and cellulitis. Late onset infections are characterized by persistent low

grade temperature and purulent drainage from the incisions.

### **Haemorrhage**

Primary haemorrhage may be due to bleeding from the vaginal cuff or pedicles or may be due to retroperitoneal haemorrhage<sup>1</sup>. Secondary haemorrhage, which presents after 24 hours is usually due to infection.

### **VVF**

VVF occurs most often after TAH for benign condition the incidence being as low as 0.2%<sup>1</sup>.

### **Objective**

The objective of this study was to document peri-operative and post-operative complications observed after hysterectomy, regardless of the route and the operator.

### **Material and method**

A hospital based prospective study was carried out at KMCTH, Sinamangal for six months duration from Bhadra 2059 to Magh 2059 in the department of gynaecology and obstetrics.

All the patients which underwent hysterectomy were followed from the time of admission to time of discharge and two weeks thereafter. All the patients received prophylactic antibiotics for 5 days with ampicillin and metronidazole or ampiclox and metronidazole. At time of surgery following things were noted

1. Surgeon
2. Indication
3. Route of hysterectomy
4. Time taken for surgery
5. Any complication if occurred during surgery in detail
6. Blood loss
7. Additional risk factors which contribute to postoperative morbidity were also noted.
8. Post operative morbidity like febrile morbidity, wound infection, blood transfusion and length of hospital stay was also noted.
9. After discharge patients were followed for 2 weeks and any complication occurred was noted.

## Results

Total number of hysterectomies done were 50 of which 31 were total abdominal hysterectomy.

**Table 1.** Indication of Hysterectomy (TAH)

Indication	No.	Percentage
Fibroid uterus	12	24
DUB	8	16
CIN	4	8
Benign ovarian tumour	2	4
Chronic cervicitis	1	2
Ist degree U_V prolapse with previous LSCS	1	2
Endometriosis	1	2
Prophylactic for Ca breast	1	2
Post menopausal bleeding	1	2
Total	31	62

For Vaginal Hysterectomy -  
Indication- All of were 2<sup>nd</sup> degree U-V prolapse.

**Table 2.** Intra operative complication

	Abdominal hysterectomy		Vaginal hysterectomy	
	No.	Percentage	No.	Percentage
Anaesthetic complication	0	0%	0	0%
Haemorrhage so as to require blood transfusion > 500ml	2	4%	2	4%
Injury to viscera:				
Bladder	1	2%	0	0%
Ureter	0		0	0%
Bowel	0		0	0%

**Table 3.** Post operative complication

	Total Abdominal hysterectomy		Vaginal hysterectomy	
	No.	Percentage	No.	Percentage
Febrile morbidity	1	2%	0	
Non-febrile morbidity				
1) Haemorrhage			0	
i) Reactionary				
ii) Secondary	1	2%	1	2%
2) Paralytic Ileus	0		0	
3) Wound complication				
i) Sanguinous frankpus or	3	6%	0	
ii) Haematoma	0		0	
iii) Dehiscence	0		0	
iv) Burst Abdomen	0		0	

## Discussion

Total Number of hysterectomies performed during study period was 50. There were no anaesthetic complications noted during the surgery, which could be due to considerable advances in the anaesthesia. There were 4 cases of intra-operative haemorrhage in each abdominal hysterectomy and vaginal hysterectomy; both cases of abdominal hysterectomy had plenty of adhesion. One was case of endometriosis and other was of broad ligament fibroid requiring skilful dissection. Both cases of vaginal hysterectomy were of long standing utero-vaginal prolapse. The incidence of haemorrhage was much more 2.8% in the study by Cosson M, Lambaudie E, Boukerrou M, Querleu D, Crepin G.

Bladder injury (2%) remains the most common visceral injury in this study. The bladder injury occurred in case of broad ligament fibroid uterus with severe adhesion present distorting the normal anatomy. Cosson M, Lambaudie E, Boukerrou M, Querleu D, Crepin G has reported 0.9% of bladder injuries in their analysis. Draca-P has reported 2 bladder injuries in a series of 817 vaginal hysterectomies.

Febrile morbidity due to urinary tract infection was noted in one patient of abdominal hysterectomy. Ahmed F, and Wasti S has noted 16% of urinary tract infection in their study of abdominal hysterectomies.

There was 2 cases of secondary haemorrhage one in each abdominal and vaginal hysterectomy, secondary haemorrhage in abdominal hysterectomy was in case of endometriosis which had prolonged operative time and required laprotomy in which conservative measure was applied. Secondary haemorrhage following vaginal hysterectomy was treated conservatively with antibiotic.

There were three (6%) cases of wound infection two with Serosanguinous discharge and were managed conservatively and one with frank pus required secondary suture. Similar observation was observed by Ahmed F, and Wasti S.

## Conclusion

Intra operative and postoperative complications after hysterectomy are not rare events. In order to control

the complication and decrease the morbidity a high risk population should be defined on the patients history of pelvic and surgery and endometriosis, on their parity and size of their uterus. For these patients, the most appropriate route should be preferred and complication should be assessed and treated. The results of the study may serve as a baseline for comparison and indicate intervention, which may contribute to reduction in peri and postoperative complication rate.

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