

Complications during Vaginal Hysterectomy: How to get over Them?

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ABSTRACT

Today vaginal hysterectomy is the most commonly performed gynecological surgery for prolapsed uteri and for other conditions, like fibroid, dysfunctional uterine bleeding, cervical intraepithelial neoplasia, etc.

Vaginal hysterectomy has least incidence of complications. Complications like hemorrhage, infection, bladder injury, etc. are known.

This prospective study was carried out at a tertiary hospital to analyze the complications and find measures to prevent or decrease complications.

Primary hemorrhage was the most common complication, followed by bladder injury and infection. Thus proper selection of cases, preoperatively prepare for any eventuality and intraoperative proficiency can decrease vaginal hysterectomy complications.

Keywords: Vaginal hysterectomy, Complications.

INTRODUCTION

Hysterectomy is the most commonly performed gynecological surgery which has excellent long-term results, and it would be prudent to select options of hysterectomy with least complications.

Advances in medical field are going at a great speed, and so advances and innovations in surgery led to resurgence in learning with respect to descent of uterus, volume of uterus and history of previous surgeries, as it is the need of the hour.

Previously 80% hysterectomies were done abdominally but now more than 70% of the hysterectomies are done by vaginal route because the complications are 70% less as compared to abdominal route of hysterectomy.

Vaginal hysterectomy dates back to 120 AD according to medical historian Leonardo,¹ when Soranus did a vaginal hysterectomy for the first time and since then it has been refined by Baudelocque (1800), Recamier (1829), Pean, Schroeder, Schuchardt, etc.

No surgery is 100% safe and, even in best of hand, complications are known. Route of hysterectomy thus cannot be generalized and individualization of case is important to minimize complications by constant process of evolution and learning upholding the principles of modern medicine.

AIMS AND OBJECTIVES

This prospective study was carried out for over 2 years in a tertiary rural hospital.

- To evaluate the complications in vaginal hysterectomies

- To analyze and formulate strategies to prevent or minimize complications.

MATERIALS AND METHODS

- Vaginal hysterectomies for proposed uteri were grouped as group A (Table 1)
- Vaginal hysterectomy for other indications, like fibroid, adenomyosis, dysfunctional uterine bleeding, cervical intraepithelial neoplasia, etc. were grouped as group B (Table 2).

Table 1 Distribution of women in group A

III prolapse with cystocele, enterocele, rectocele (vaginal hysterectomy with anteroposterior repair)	126
Procidencia with vaginal eversion	14
Vaginal hysterectomy with anterioposterior repair with pelvic floor repair with sacropinous colpopexy	3
Patients with previous cesarean section, sling (virkud)	6
Total	149

Table 2 Indications for nondescent vaginal hysterectomy in group B

Fibroid uterus	86
DUB	44
Adenomyosis	12
CIN III	4
Total	146

Various factors, like epidemiological, education, literacy, indication for hysterectomy, selection criteria, intraoperative complications, postoperative complications were noted and analyzed (Table 3).

Exclusion criteria for group B were:

- Previous two cesarean sections
- More than 16 weeks size uterus
- Endometriosis.

Table 3	The epidemiological factors, preoperative blood transfusion and duration of surgeries	
	Group A	Group B
Average age	50-60 years	30-50 years
Literacy	Uneducated	< 6th grade
Socioeconomic status	Low	Low
Preoperative blood transfusion	36%	6%
Duration of surgery	2 hours	40-90 minutes

DISCUSSION

Vaginal hysterectomy is a discipline in itself, and quality of life consideration is our main aim while doing a surgery (Table 4).

Table 4	Complications encountered during vaginal hysterectomy and in postoperative period	
	Group A	Group B
Hemorrhage	4	1
Bladder injury	1	2
Bowel injury	—	—
Fever	8	1
Numbness in legs	3	2
Secondary hemorrhage	9	2
Laparotomy	1	3
Vault prolapse	3	—
Total	29	11

Proper selection criteria and preoperative preparation should be done as follows:

Group A	Group B
<ul style="list-style-type: none"> • Treat medical problems • Anemia • Packing • Estrogen cream 	<ul style="list-style-type: none"> • Descent • Volume • Transverse space • Examination under anesthesia to see mobility
<ul style="list-style-type: none"> • Ulcer should be healed • Investigations, preanesthetic check-up. 	<ul style="list-style-type: none"> • Investigations, preanesthetic check-up

Vaginal hysterectomy is done in dorsal lithotomy position and is associated with sciatic nerve, femoral nerve and peroneal nerve injuries.

In our study, five women had femoral palsy as compared to Dunnington² et al where they had femoral palsy in 33 women out of 1,762 women. This is due to compression and acute angulation of nerve as it passes below the inguinal ligament.

Rest, reassurance, analgesics and physiotherapy³ given to our patients and they went home well.

Incidence of ureteric and bladder injuries is 1/1000 and 0.01/1000 in vaginal hysterectomies.⁴ During vaginal hysterectomies, bladder and ureteric injuries are the main cause of litigation as bladder is prone to injury while separating it from cervix.

Review says that bladder complications are minimum in vaginal hysterectomies. In our study, three women out of 286 had bladder injuries and we had to do a laparotomy to suture bladder in two of them.

This complication can be minimized by catheterization during surgery from time to time and in women with previous cesarean section or during surgery when we go in more cervical depth to use the surgical window (vescico cervical space) to get the right plane as the bladder is loose in its lateral fifth. Thus, familiarity with anatomy, perseverance and surgical window minimizes mishaps.

Ureters are at risk in 0.01/1000 cases which can be prevented during vaginal hysterectomy by:

- Applying utero sacrals, Mackenrodt's after bladder retraction
- Do not clamp blindly when the uterine artery clamp slips
- In cases with previous cesarean section and massive prolepses be careful
- In cases with distorted anatomy and sagging uterines in fibroid.

Hemorrhage is the most common complication in any surgery and vaginal hysterectomy is no exception (Table 5).

Table 5	Incidence of hemorrhage in our study and others	
	Group A	Group B
Present study	4/140	1/146
Mintz ⁵	8/280	2/292
Seth ⁶	12.5%	5%
Weber ⁷	1.4%	2.4%
		72/2940

Infiltrating cervix with vasoconstrictor before surgery reduces blood loss.⁸

Evaluate pedicles, never clamp blindly, identify and religate. If bleeding persists then do:

- Packing
- Embolization
- Internal iliac ligation.

Hemorrhage during surgery was evaluated using weight technique (weight of mops preoperatively and postoperatively). In two women in group A, we had to do internal iliac ligation.

Secondary hemorrhage was present in nine women and was treated with antibiotics. While doing vaginal hysterectomy we may need to do a laparotomy during eventuality. So, we should start with open minds and be prepared for a laparotomy in case of an eventuality (Table 6).

The laparotomies were done for two cases; bladder injuries and internal iliac ligation. In nondescent vaginal hysterectomy uterus at times is not favorably mobilized after uterines. In such patients trigger point clamp should be applied before any morsellation technique. Trigger point is a clamp applied medially after securing uterines on the broad ligament. This

Table 6	Incidence of laparotomy in our study and others
Copenhaver ⁸ , Coulamprat ⁹	6/1000, 16/2106
White ¹⁰	2/300
Present Study	4/286
Kem Hospital	7/1762
Seth	2/5344
Pratts ¹¹	8/1218

secures vessels, decreases retrograde bleeding and mobilizes uterus.

POSTOPERATIVE PERIOD

Three women in group A had vault prolapse who were treated with vault repair.

Thus, during vaginal hysterectomy intraoperative obliteration of enterocele, doing a vault suspension and in women with external laxity a sacrospinous colpopexy^{12,13} can prevent vault prolapse at a later date.

CONCLUSION

Thus, difficult cases are of prolapse uteri for vaginal hysterectomy when there is long standing, massive prolapse with eversion of vagina and more uterocervical length. And in nondescent vaginal hysterectomy cases with restricted mobility, more volume, narrow pubic angle are difficult. Thus, proper selection of cases, preoperative preparation with knowledge, confidence steady, purposeful and determined actions and proficiency in variety of techniques is the key for a successful outcome during vaginal hysterectomy.

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