

## VAGINAL REPAIR OF BLADDER INJURY DURING LAPAROSCOPIC ASSISTED VAGINAL HYSTERECTOMY.

### Introduction

Intraoperative injuries of bladder and ureters are uncommon during laparoscopic assisted vaginal hysterectomy (LAVH). The management of a bladder injury depends on its size, location compared to the ureteric orifices, and the expertise of the reconstructive surgeon. This film describes the steps involved in the vaginal repair of a large supra-trigonal injury recognized intra-operatively.

### Design

Following a laparoscopic assisted vaginal hysterectomy in a 57 woman with a history of two prior C-sections, blood was noted in the urine drainage bag thus prompting a cystoscopy. During cystoscopy, a large bladder injury was noted over the back wall of the bladder, away from the ureteric orifices.

The first step in management consisted in placing a Foley catheter through the injury site, inflate the balloon to occlude the defect, fill up the bladder and then place a punch suprapubic tube catheter

Now the bladder rent can be closed starting at the right corner using fine absorbable running suture. Each suture pass incorporates the bladder muscularis and the mucosal edge. Then a second running suture is started on the contralateral side. Once the defect repair nears completion, the Foley catheter is removed leaving behind the guidewire initially placed to identify the tract. This guidewire will be removed once the closure has been completed.

Once the bladder defect has been closed, cystoscopy was performed to ensure watertightness and also to confirm ureteral integrity which was not a real concern in this case since the injury occurred far away from the trigone.

A tongue of omentum was then added over the repair to provide tissue interposition and was secured in place with several interrupted sutures. Peritoneum flap can be used as well. Finally the vaginal incision was closed with running sutures. Postoperative care included anticholinergic medications to avoid bladder spasms and daily antibiotic coverage to avoid a secondary bladder infection while the catheters were in place. Four weeks later, a lateral voiding cystogram confirmed bladder healing, after which the suprapubic tube was removed.

### Results

The management of this rare event was first reported in the Journal of Urology in 1994. [1] Since then, we have observed several more cases over the ensuing decades, all handled in similar fashion with a satisfactory outcome.

### Conclusion

Although rare, most vaginal injuries occurring during LAVH can undergo vaginal repair following the steps described above with satisfactory outcome. Tissue interposition and adequate and uninterrupted bladder drainage are necessary to obtain bladder healing.

### References

1. Hernandez RD, Himsl K, Zimmern PE: Transvaginal repair of bladder injury during vaginal hysterectomy. J Urol, 152:2061, 1994

### Disclosures

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