

Ureteral injury during non descent vaginal hysterectomy: Early diagnosis and management

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Abstract

Ureteric injury is one of the most common complications of hysterectomy, both in vaginal and laparoscopic and is a source of serious morbidity for the patient. Prevention is the best approach, which requires the surgeon to have a high index of suspicion. However, when the injury occurs, early recognition is important as the treatment at this stage avoids more serious complications. This case highlights these points and draws attention to early management of this complication.

Keywords: Ureteric Injury, Vaginal, Laparoscopic.

Introduction

Bladder, ureter, and bowel injuries are relatively common and known complications of hysterectomy, whether total abdominal, vaginal, laparoscopic, or laparoscopically-assisted. Vaginal hysterectomy is one of the most common surgical procedures associated with ureteric

injuries. One of the commonest site of this complication include the injury to the lower ureter due the close proximity of the lower ends of the ureters to the uterus. Because of the proximity of urological and reproductive systems, the former carries a higher risk of injury during surgery of the reproductive system. Ureteral injuries are reported in 2 %, 1.3% and 0.03% of abdominal, laparoscopic and vaginal hysterectomies respectively(1). The association of ureteric injuries with vaginal hysterectomies is rare and there is sparse literature on the same. Our case report reveals one such complication and demonstrates the benefits of early management of this condition.

Case summary: We present the case of Mrs M, a 52 year old female, an otherwise healthy female, who presented with abnormal uterine bleed for the past 6 months following which she underwent diagnostic

hysteroscopy with hysteroscopic polypectomy with dilatation and curettage with histopathology revealing disordered proliferative endometrium following which the patient underwent non descent vaginal hysterectomy with bilateral salpingectomy with vault suspension to uterosacral ligament. The procedure and early post operative was uneventful and the patient was discharge on post operative day 2. 1 week post operatively, the patient presented with pain in right lower abdomen radiating from loin to groin following which she was evaluated and was found to have right sided gross hydronephrosis with presence of sudden cutoff at right distal ureter on ultrasound(Fig. 1). A CT urography was done to confirm the findings following which the patient was planned for surgical intervention(Fig 2(a and b)).

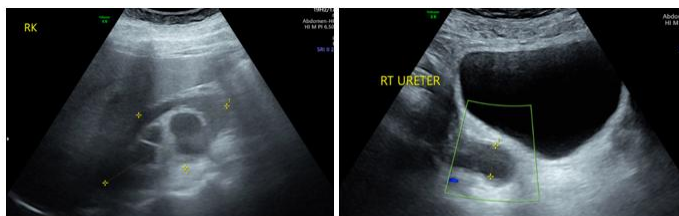


Fig. 1(a)

Fig. 1(b)

Figure 1 : (a) USG showing gross right sided hydronephrosis. (b) USG showing right hydroureter.

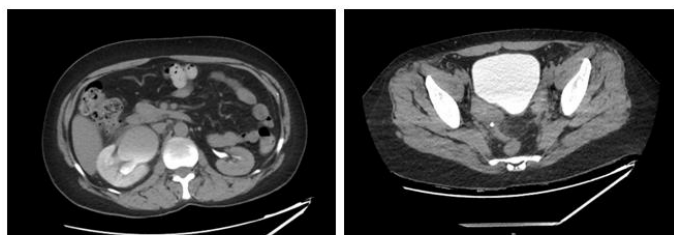


Fig. 2(a)

Fig. 2(b)

Figure 2: (a). CT imaging showing gross right sided hydronephrosis. (b) CT imaging showing suspected site of obstruction.

Cystoscopy with right ureterorenoscopy and retrograde pyelography was done which revealed tight narrowing in distal ureter with proximal hydroureteronephrosis .Vaginal exploration was done and right sided ascending

structures and pedicles were freed by removing sutures. Repeat ureteroscopy revealed release of ureteric kinking following which ureteric dilatation was done and DJ stent was placed. The post operative period was uneventful and the patient was discharged on POD 2. The patient is on regular follow up and is doing well.

Discussion

Gynaecological procedure have been known to be associated with inherent complications including the risk of ureteric injury. This is more so with lower end of the ureter than the mid and proximal ureter, as it lies close to the uterine artery. The injuries are thought to be due to in- adverted sutures placement or usage of energy devices in this area. (2,3). Ligation or kinking can result from a suture or tie taken during vascular pedicle control or during vault suspension to ureterosacral ligament. Haematoma or lymphocele accumulation can also obstruct the ureter.

The ureteric injury rates associated with vaginal hysterectomy are close to 0.03%.(1) Experience, clean bloodless dissection and good knowledge of the anatomy are some of the principles of prevention. Asking for help when one is uncertain can also prevent complications or pick up injuries early. The delay in detecting the injuries can be minimised if the clinicians form a habit of having high index of suspicion (4). If any doubt of injury crops up during surgery, some surgeons will perform cystoscopy and ureteric catheterisation to be sure that the ureter is intact and if not then primary repair of affected ureter is undertaken (5). Further confirmation of the ureteric injury in early post-operative if suspected may be made by doing retrograde or ante grade pyelography or with CT urography scan or when available ureteral jet ultrasonography applicability (5-7). If the patient presents late post-operatively, certain symptoms and signs may

point to this injury such as flank pain and deranged kidney function tests.

The persistent hydronephrosis may lead to renal dysfunction. Repair of injury can then be performed as soon as possible to minimise the morbidity as highlighted in this case report.

References

1. Manavita, M. Review article. Complications and management of ureteric injury during laparoscopic hysterectomy. Project submitted towards Completion of Diploma in Minimal Access Surgery, World Laparoscopy Centre. Max Hospital Gurgaon, New Deihl India, April 2008.
2. Nezhat, C., Nezhat, F., et al. Injuries associated with the use of linear stapler. During operative laparoscopy: A review of diagnosis, management and prevention. *J.Gynaecol.Surg.* 1993; 9: 145-150.
3. Kadar, N. and Lemmerling, L. Urinary tract injuries during laparoscopically Assisted vaginal hysterectomy: Causes and prevention. *Am. J.Obstet. Gynaecol.* 1994; 170: 47-48
4. Waihenya, C. G. Ureterovaginal Fistula following laparoscopic assisted vaginal hysterectomy: Case report. *East Afr. Med. J.* 2006; 83: 346-48.
5. Yudai, T. Hironori A., et al. Ureteral catheter placement for prevention of ureteral injury during laparoscopic hysterectomy. *J. Obstet. Gynaecol. Res.* 2008; 34: 1-67
6. Hung, M. J., Huang, C. H., et al. Ultrasonic diagnosis of ureteral injury after Laparoscopically assisted vaginal hysterectomy. *Ultrasound in Obstet. and Gynaecol.* 2000; 16: 279-283.
7. Hysin-Hung Wu, Pei Yin Yang, et al. The detection of ureteral injuries after hysterectomy. *Minimally Invasive Gynaecol.* 2006; 13: 403-408.