

Forgotten Stent with Calcified Cast in Ureter and Huge Vesicle Calculus, Rare and Unusual Complication of Abdominal Hysterectomy

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Abstract

An unusual case of forgotten ureteric stent developing ureteric calculus cast and huge vesicle calculus is reported. 45 year old lady reported to PIMS (Pacific institute of medical sciences, Umarda, Udaipur, Rajasthan) with chronic pain abdomen of 6-7 months duration and haematuria since 2 days. There was history of pelvic surgery 6 months back when total abdominal hysterectomy was done. She was investigated and on suprapubic cystostomy full cast of calculus occupying ureter and vesicle calculus along with forgotten stent was removed. Patient made an uneventful recovery with adequate renal function.

Keywords: Ureteric Injury; Ureteric Stent; Vesicle Calculus.

insertion and removal after 6 weeks [4].

Between postoperative day 1 and 28, patients in whom ureteral injury was suspected require RGP and IVP which may show Non-visualization of kidney, hydronephrosis, or contrast leakage into the pelvic cavity. Contrast CT may depict urinoma formation or ureteral obstruction [5].

Retrograde ureteral stenting with a Double-J stent can be attempted in all patients; if successful, the ureteral stent can be preserved for 2 to 3 months [6].

Case Report

45 year old lady para 5 reported to PIMS (Pacific institute of medical sciences Umarda Udaipur Rajasthan), with pain abdomen off and on since last 6-7 months. Pain was localized on left back and hypogastrium. It was chronic dull ache in nature. Last 2 days she had been having dysurea and haematuria. Detailed history revealed that she had been an old case of fibroid uterus with endometriosis for which abdominal hysterectomy was performed 6 months back. During the pelvic surgery there was suspicion of bladder and ureteric injury for which urologist was called. As recorded in medical documents retrograde ureteral stent was placed on left side. Patient was instructed to come for regular follow up which she did not do. She had now reported with above complains. Plain X-ray abdomen revealed huge vesicle calculus and ureteric shadow on left side. (Fig.1) Intra venous pyelography and contrast computerized tomography scan revealed functional kidney both sides with vesicle and multiple ureteric calculus with calcified ureteric cast. Patient was taken up for laparotomy. Open suprapubic cystostomy with traditional cutting for stone was performed. A huge calculus of size 7.5 cm x 8 .00 cm was

Introduction

Ureteral injuries are reported to occur in approximately 0.1 to 2.5% of gynaecologic surgeries [1]. Ureteral injury is one of the most serious complications of gynecologic surgery and is often associated with significant morbidity, the formation of ureterovaginal fistulas, and the potential loss of kidney function, especially when recognized postoperatively [2].

Intra-operatively diagnosed ureteral injuries can be managed with primary closure, excision of the compromised segment followed by ureteroureterostomy or uretero-neocystostomy depending on site and extent of injury [3]. Choice of treatment in all patency compromises remains Retrograde ureteral stent

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removed and while pulling it out whole cast of ureter along with forgotten stent was easily removed. (fig.2-3). Patient made an uneventful recovery and was discharged on 14th post operative day.

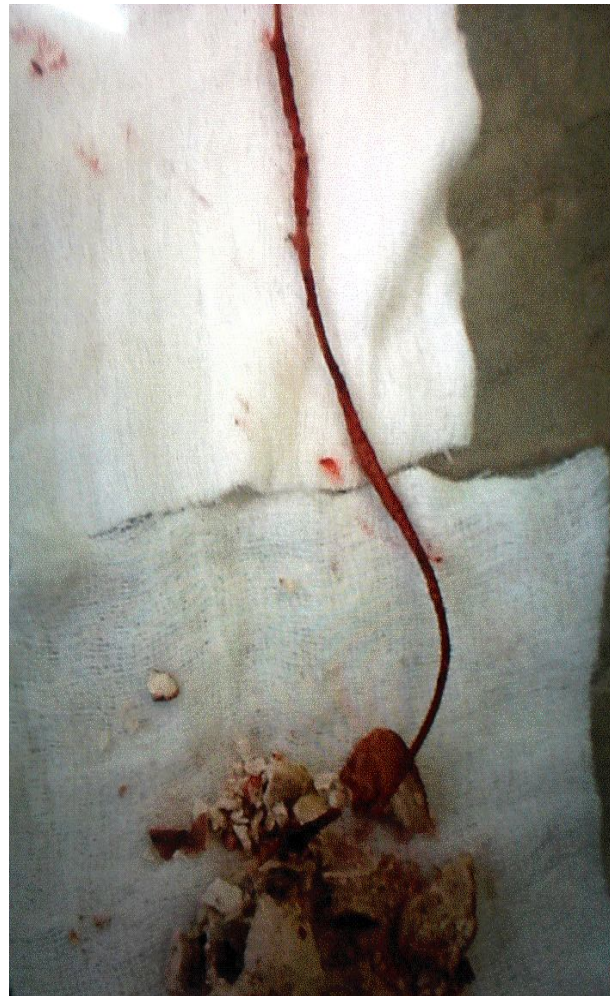
Fig. 1: Plain X-ray abdomen showing large vesicle stone with ureteric cast



Fig. 2: Showing large vesicle calculus removed on cystostomy



Fig. 3: Showing vesicle calculus along with ureteri cast and the forgotten stent



Discussion

Ureteric injury is rare in obstetric and gynaecological practice but, when it occurs, it has serious implications in terms of both morbidity and litigation [7]. Diagnosis of ureteric injury may be made intra-operatively but 70% are diagnosed postoperatively [8]. It has been said that 'the venial sin is injury to the ureter, but the mortal sin is failure of recognition [9]. Management depends on the timing of diagnosis, the aetiology, the length and location of the injury, the extent of the causative operation and the condition of the woman [10]. Various modalities include Stent placement, Ureteroneocystostomy, Ureteroureterostomy, Psoas hitch, Boari flap with a psoas hitch Transureteroureterostomy Ureteroileocystostomy Ureterocalycostomy Renal auto-transplantation. Despite the prevalence of ureteric injury being higher following gynaecological cancer

surgery, it is benign gynaecological surgery that accounts for most cases. Reports show conflicting results when comparing the incidence of ureteric injury following laparoscopic surgery with the incidence following open gynaecological surgery. Some studies report similar figures, while others report a significantly higher incidence after laparoscopic surgery [11]. Preventive strategies to reduce the risk of ureteric injuries include appropriate operative approach, Adequate exposure, Avoid blind clamping of blood vessels, Ureteric dissection and direct visualization Mobilise bladder away from operative site Short diathermy applications [12]. Radiographic investigations for ureteric Injuries include Intravenous urogram, Abdominal and pelvic computerized tomography scan within travenous contrast, Retrograde ureterogram, Renal ultrasound, Cystoscopy, Contrast-dye tests [13]. General principles of ureteric repair include tension-free anastomosis by ureteric mobilization, Ureteric dissection preserving adventitial sheath and its blood supply Minimal use of fine absorbable suture to attain water tight closure. Use of peritoneum or omentum to surround the anastomosis Drain the anastomotic site with a passive drain to prevent urine accumulation Stent with a ureteric catheter. Consider a proximal diversion [14].

Conclusion

Ureteric injury is very serious complication associated with abdominal hysterectomy. It is preventable by taking appropriate measures like preoperative intravenous pyelography and ureteral catheterization in high risk cases. Steps during operation include avoiding blind clamping and proper dissection of ureter before vascular clamps. An early detection of injury to ureter and retrograde ureteral stent can avoid major complications of urinary tract.

References

1. Swati Jha, Aravinthan (Arri) Coomarasamy, Kiong Kong Chan Ureteric injury in obstetric and gynaecological surgery *The Obstetrician & Gynaecologist*, 2004; 6: 203-208.
2. Saidi MH, Sadler RK, Vancaillie TG, Akright BD, Farhart SA, White AJ. Diagnosis and management

- of serious urinary complications after major operative laparoscopy. *Obstet Gynecol*, 1996; 87: 272-6.
3. Harkki-Siren P, Sjoberg J, Tiitinen A. Urinary tract injuries after hysterectomy. *Obstet Gynecol*, 1998; 92: 113-18.
4. Harkki-Siren P, Sjoberg J, Kurki T. Major complications of laparoscopy: a follow-up Finnish study. *Obstet Gynecol*, 1999; 94: 94-8.
5. Grainger DA, Soderstrom RM, Schiff SF, Glickman MG, DeCherney AH, Diamond MP. Ureteral injuries at laparoscopy: insights into diagnosis, management, and prevention. *Obstet Gynecol*, 1990; 75: 839-43.
6. Utrie JW Jr. Bladder and ureteral injury: prevention and management. *Clin Obstet Gynecol* 1998; 41: 755-63.
7. Aslan P, Brooks A, Drummond M, Woo H. Incidence and management of gynaecological related ureteric injuries. *Aust N Z J Obstet Gynaecol*, 1999; 39: 178-81.
8. Kuno K, Menzin A, Kauder HH, Sison C, Gal D. Prophylactic ureteral catheterization in gynecologic surgery. *Urology* 1998; 52: 1004-8.
9. Symmonds RE. Ureteral injuries associated with gynecologic surgery: prevention and management. *Clin Obstet Gynecol* 1976; 19: 623-44. Dowling RA, Corriere JN Jr, Sandler CM. Iatrogenic ureteral injury. *J Urol* 1986; 135: 912-15.
10. Mann WJ. Intentional and unintentional ureteral surgical treatment in gynecologic procedures. *Surg Gynecol Obstet* 1991; 172: 453-6.
11. Harkki-Siren P, Sjoberg J, Kurki T. Major complications of laparoscopy: a follow-up Finnish study. *Obstet Gynecol* 1999; 94: 94-8.
12. Grainger DA, Soderstrom RM, Schiff SF, Glickman MG, DeCherney AH, Diamond MP. Ureteral injuries at laparoscopy: insights into diagnosis, management, and prevention. *Obstet Gynecol* 1990; 75: 839-43.
13. Armenakas NA. Current methods of diagnosis and management of ureteral injuries. *World J Urol* 1999; 17: 78-83.
14. Symmonds RE. Ureteral injuries associated with gynecologic surgery: prevention and management. *Clin Obstet Gynecol* 1976; 19: 623-44.