

## Ureteral section ligation: A beautiful ureteral opacification by nephrostomy

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World Journal of Advanced Research and Reviews, 2024, 22(02), 1652–1654

Publication history: Received on 10 April 2024 revised on 22 May 2024; accepted on 24 May 2024

Article DOI: <https://doi.org/10.30574/wjarr.2024.22.2.1616>

### Abstract

This case report presents a 39-year-old primiparous woman who developed urine leakage following a hysterectomy for hemostasis. Uroscan revealed a left pelvic ureteral tear, unsuccessfully managed with JJ stents. A left percutaneous nephrostomy revealed double ligation with total ureteral section. Three months later, ureteral reimplantation was scheduled. Ureteral injuries are rare but can occur during pelvic surgery, often requiring advanced imaging for diagnosis and management. Nephrostomy with opacification proves valuable in visualizing and assessing ureteral injury extent when conventional methods are impractical.

**Keywords:** Ureteral section ligation; Hysterectomy; Nephrostomy percutaneous; Ureteral opacification.

### 1. Introduction

The pelvic ureter has an intimate relationship with the organs in the region, making accidental iatrogenic injury a complication frequently described in the literature, particularly in the context of gynaecological surgery. While these lesions can be easily diagnosed and repaired intra-operatively, the diagnosis is sometimes made post-operatively. This can compromise the patient's vital prognosis or renal functional prognosis.

### 2. Case report

39-year-old women, primiparous. Underwent a hemostasis hysterectomy. One week after of the surgery the patient presented urine leakage via the redon. Uroscan showed a left pelvic ureteral tear with upstream ureteropelocal dilatation (figure1). jj stents has been tried and failed (figure 1). The patient underwent a left percutaneous nephrostomy. Opacification by nephrostomy showed a double ligation with total section of the ureter(figure1). Three months later the patient was scheduled for ureteral reimplantation on psoatic bladder.

### 3. Discussion

Ureteral injuries account for less than 1% of pelvic surgery complications(1). only one third of injuries are diagnosed intraoperatively(1).

The nature of the injury may be a laceration, partial or total section, ligation or section ligation like our patient(2).

Two of the most important contributing factors to ureteral injury are the type of pelvic pathology and the surgeon's experience(3).

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Clinically, ureteral lesions may be manifested by leakage of urine by the redon drain or the vagina, lombalgy or a a pelvic mass (urinoma)(4).

Ultrasound is the first line examination, it shows the dilation of the excretory tract and the aspect of the contralateral kidney(4). Uroscan is the reference examination to demonstrate the leakage and to specify its site(4). When ureteral injury is suspected, an excretory urogram is often requested by the referring urologist(3). When the excretory urogram shows abnormal findings, but the level and extent of injury are not clear, the next imaging study is either retrograde or antegrade pyelography by nephrostomy(3) (4).



**Figure 1** Antegrade pyelography

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#### **4. Conclusion**

Ureteral section ligation is very rare. Nephrostomy with opacification can be used to visualize the level and extent of ureteral injury if retrograde ureteral catheterization is not possible.

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#### **Compliance with ethical standards**

##### *Acknowledgments*

We want to acknowledge our patient from whom we learn. The authors have declared that they didn't receive any financial support for this study.

##### *Disclosure of conflict of interest*

Authors have no conflicts of interest to declare.

##### *Statement of informed consent*

Written Informed consent was obtained from all individual participants included in the study.

*Availability of data and materials*

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

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