



Case report

Unintended Foley's catheter placement into the ureter: A case report

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ABSTRACT

Introduction: Foleys catheter insertion is among the most common urological procedures performed by urologists. **Case presentation:** Here we present a case diagnosed with neurogenic bladder before 3 years and she was on long-term indwelling Foleys catheter since that due to urge incontinence and changes her catheter regularly every 10 to 12 weeks, where the tip of the catheter was found in the right vesico-ureteric junction with hydronephrosis of the right kidney.

Discussion: The two most commonly encountered complications of Foley catheter placement are urethral injury and retention of the Foley balloon in the urethra. Misdirection of Foleys catheter into the ureter is a rare complication. Up to our knowledge, only twenty cases have been reported in literature.

Conclusion: One should keep in mind that inadvertent insertion into the ureter can occur, especially in female patients with neurogenic bladder.

1. Introduction

Foleys catheter insertion is among the most common urological procedures performed by urologists. Inappropriate insertion of the Foleys catheter into the ureter although rare but can occur and may cause complications such as ureteric injury, obstruction with hydronephrosis, and sometimes ureteric perforation [1]. In our case report we present a case of ureteric obstruction post Foleys catheter replacement in a patient with neurogenic bladder. This study was reported in accordance with the SCARE criteria [2].

2. Case presentation

A 76 year-old female patient presented to our clinic, with past medical history of diabetes mellitus and hypertension, she was diagnosed with neurogenic bladder before 3 years of her visit due to a benign brain tumor and was on long-term indwelling Foleys catheter due to urge incontinence.

Her catheter was changed regularly every 10 to 12 weeks, three days after her last catheter change. Post Catheter replacement, the patient

started to complain from right colicky flank pain, increase in severity with time, associated with decrease urine volume drainage from the catheter into urine bag with most of the urine leaking around the catheter, nausea but no vomiting, and no fever. Pain responded partially to analgesia. On physical exam, she had stable vital signs, with positive costo-phrenic angle tenderness. Ultrasound Imaging showed moderate right Hydronephrosis.

Non contrasted Urinary CT scan was done showing the tip of the catheter in right vesico-ureteric junction with hydronephrosis of the right kidney (Fig. 1), so deflation of the catheter balloon was done and catheter removed and replaced with new one. Pain settled down after that and patient was discharged home.

3. Discussion

The two most commonly encountered complications of Foley catheter placement are urethral injury and retention of the Foley balloon in the urethra [3,4].

Misdirection of Foleys catheter into the ureter is a rare complication. Up to our knowledge, only twenty cases have been reported in literature

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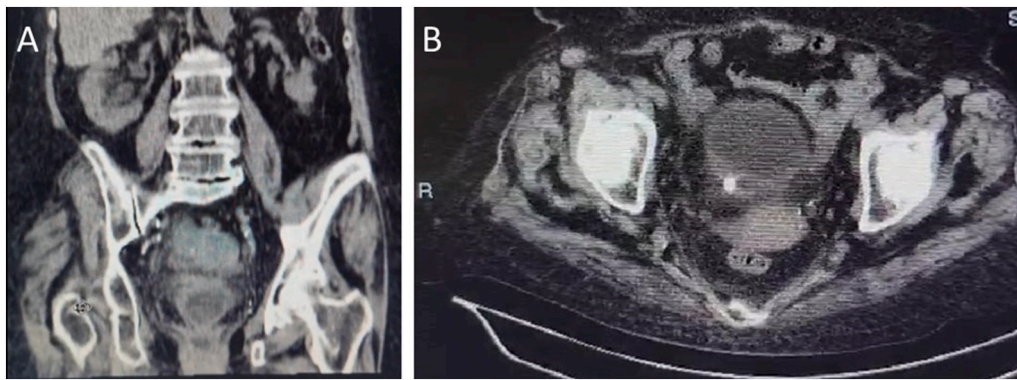


Fig. 1. Non contrasted urinary CT scan showing the tip of the catheter in right vesico-ureteric junction with hydronephrosis of the right kidney.

[1]. Risk factors include female patient, neurogenic bladder, sensory bladder disorders [5], small bladder capacity [6,7] and dilated ureteric orifices [8,9]. An inflated catheter balloon or the tip of the catheter itself in the ureter causes hydronephrosis due to obstruction and may lead to ureteral injury and laceration [9,10]. Also, urine had to find its way out along the side of the indwelling catheter and not passing into urine bag [6,7] as in our patient.

Patient presentations were variable, as may present with persistent urine leakage [6,9,11,12], groin pain [13,14], back pain and flank pain.

Although ultrasound can be used for diagnosis of such cases, CT urogram without contrast is a noninvasive, useful tool for definitive diagnosis [9,11,15,16].

A cystogram also can be used but it cannot be done in patients with allergy to contrast media, given the possibility of contrast extravasation from the ureteric injury [5,17].

If inadvertent ureteral catheterization is suspected, then consideration to remove the catheter by gentle pulling on the catheter after balloon deflation [18–20]. Surgical treatment may also be needed in case of ureteric injury.

4. Conclusion

Although Foleys catheter insertion is relatively easy and safe procedure, one should keep in mind that inadvertent insertion into the ureter can occur, especially in female patients with neurogenic bladder.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. Written consent is available for review by the Editor-in Chief of this journal on request.

Provenance and peer review

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Ethical approval

Ethical approval for case reports and case series are waived according to the ongoing regulations of Yarmouk University.

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Author contribution

All authors read and approved the content of the submitted study.

Guarantor

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Registration of research number

Not applicable.

Declaration of competing interest

All authors declare that they have no conflict of interest.

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