

Cloudy urine should be treated early in patients with indwelling catheter secondary to spinal cord injury: A Case Report

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Received: January 21, 2019; **Published:** March 04, 2019

Abstract

Objective: To demonstrate the additional value of early treatment of cloudy urine in patients secondary to spinal cord injury (SCI). **Methods:** A SCI (C5 AIS grade A) patient experienced cloudy urine in catheter since 2015. Due to lack of clinical symptoms, he did not seek any urologic treatments for 2 years. In October 2017, he was referred to our hospital with catheter blockages. **Results:** The bladder agglomerate responsible for the catheter blockages was successfully treated by endoscopic surgery. **Conclusions:** Our case demonstrates the necessity of early treatment and follow-up to cloudy urine in SCI patients with indwelling catheter. When bladder ultrasound and abdominal x-rays examination for catheter blockages are inconclusive, cystoscopy should be performed immediately.

Keywords: Cloudy urine, Spinal cord injury, Indwelling catheter.

CASE REPORT

In October 2017, 60 years-old male patients with spinal cord injury (C5 AIS grade A) was admitted to our hospital for catheter blockages. Up to the time of admittance, the patient only adopts using an indwelling catheter and refused any urological treatment as he did not have urological symptoms except for occasionally cloudy urine (Figure 1). The catheter was changed every 2 weeks. The initial bladder ultrasound and abdominal x-rays was inconclusive. Cystoscopy revealed 3.0 cm×6.0 cm × 5.0 cm agglomerate inside the bladder (Figure 2). The agglomerate was removed by transurethral resection (Figures 3 and 4). The postoperative 6 months follow-up was uneventful and without any urologic complaint.



Figure 1: Cloudy urine in catheter

DISCUSSION

It was reported that, up to 95% of patients suffer from neurogenic lower urinary tract dysfunction secondary to spinal cord injury (SCI) (Weld KJ and Dmochowski RR, 2000). After the acute injury stage, clean intermittent catheterization (CIC), provided by self or a caregiver, is the standard procedure for patients who are

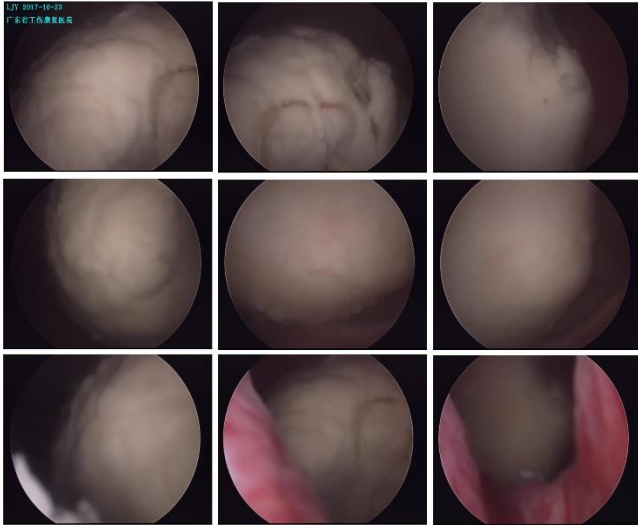


Figure 2: A 3.0cm×6.0cm×5.0cm white agglomerate inside the bladder



Figure 3: The agglomerate was consisted much white gelatum and small debris

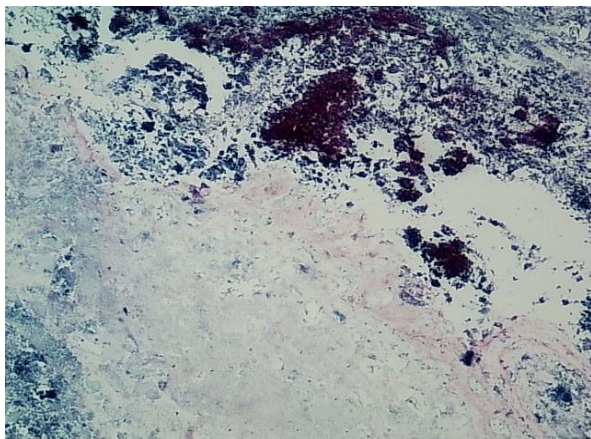


Figure 4: Pathological examination revealed that the white gelatum was degeneration and necrosis of calcified tissue

unable to empty their bladder (Groen J et al, 2016). However, 21.4% of SCI patients with high level injury (above C5) maintained or even reverted to urethral indwelling catheter due to their inability to manipulate a catheter or lacked 24-hour care (Afsar SI et al, 2013). Over 70% of these patients have urinary sludge in their catheters (Sabbuba N A et al, 2004; Feneley RC et al, 2012). Therefore, we describe a case which clearly demonstrates the additional value of early treatment for cloudy urine.

The present case was particularly informative because it highlights that any significant clinical changes in SCI patients who performed indwelling catheters should trigger further specialized care. Of interest is the finding that the traditional bladder ultrasound and abdominal x-rays did not detect the agglomerate. Possible reasons for this include (1) bladder distention was not done because of the risk of triggering autonomic dysreflexia; and (2) X-rays are limited in revealing agglomerates because of the bladder composition and gas caused by neurogenic bowel secondary to SCI. Linsenmeyer MA and his colleague (2004) reported that only 13 of 62 patients with stones found during cystoscopy were detected by the x-ray in SCI patients. Therefore, SCI patients should be thoroughly informed about the risks of indwelling catheters and regular medical assessments are strongly recommended to detect potential changes and to adapt bladder management.

CONCLUSION

Finally, although limited to a single SCI patient with indwelling catheters, the present case report indicates that early diagnosis and treatment of this condition may prevent the development of potentially life-threatening complications. If bladder ultrasound and abdominal x-rays examination for patients with catheter blockages are inconclusive, cystoscopy should be performed immediately.

Acknowledgments

This study was supported by Medical Scientific Research Foundation of Guangdong Province, China (grant number B2017040, A2018124). The authors thank Cliff S. Klein for providing assistance with comments on revising the manuscript.

Learning points : Cloudy urine indwelling catheter

Declaration of conflict of interest: None.

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