A missed and fragmented double-j ureteral stent: A rare case report

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A B S T R A C T

In the last two decades, the usage of double-j ureteral stents is highly increased. This led to increase in complications like encrustation, stent migration, retained double-j, and fragmentation. Herein, we report a rare complication of double-j ureteral stent. A 46 years old male patient presented with left flank pain and lower urinary tract symptoms. KUB image revealed a left fragmented double-j ureteral stent. We used cystoscopy to remove the distal part and ureteroscopy to remove the proximal part. We discharged the patient in same day with no complications.

1. Introduction

Usage of ureteral stent has increased in the last 20 years. Usage of ureteral stent has increased in the last 20 years. Ureteral stents are commonly used in urologic surgeries for reducing obstructions, and ureteral healing after surgeries done on ureter, the most common indication for ureteral stent placement was kidney and ureteral stone surgeries, irritative bladder symptoms and hematuria and other complication are urinary tract infections, stent encrustation, migration, stent fracture.

We present a rare case of forgotten and fragmented double-j ureteral stent in a male patient.

2. Case report

A 46 years old male patient presented to our out-patient clinic with lower urinary tract symptoms and intermittent left flank pain for five weeks ago. Past medical history was remarkable for elevated blood pressure treated with lisinopril, untreated right inguinal hernia, and left ureteroscopic lithotripsy one year ago in another hospital for stone disease with no follow-up. His vital signs were as follow: Bp = 140/80 mmHg, P = 72/min. Physical examination revealed mild right flank tenderness. Examination of other systems was unimportant. Laboratory findings: WBC = 11.8 × 10^5/ml, HGB = 12 × 10^5 gr/dl, PLT = 218 × 10^5/ml, Cr = 1.1 mg/dl, urea = 35 mg/dl. Abdominal and pelvic ultrasound showed no hydronephrosis and a shadow of double-J ureteral stent in the left kidney in addition to echogenic material in the urinary bladder. On KUB image, there was a fragmented double-J ureteral stent on the left (Fig. 1). Urinalysis showed 30–40 WBC/HpF, 2++ crystals, and RBC excess.

After taking patient consent, we decided perform cystoscopy and ureteroscopy.

On next day, we performed the surgical intervention under spinal anesthesia. We extracted the first part of the fragmented stent from the urinary bladder. Left ureteroscopy showed there was no important encrustation on the second part of the double-J stent. As a result, we extracted the ureteric part of the stent easily (Fig. 2).

Post operation recovery was uneventful. Follow-up after three weeks with KUB image and urinalysis showed full recovery with no abnormal findings.

3. Discussion

Usage of ureteral stent has increased in the last 20 years. These stents include various materials such as polyurethane, silicon, silitech, C-Flex, Percuflex and metal. All of them have advantages and disadvantages on their own. An ideal material should be chemically stable in urine, resistant to infection and crustation, non-irritating, and affordable. Stents made of Polyethylene are susceptible to fracture even after short time remaining in situ. Various mechanisms have been proposed to explain ureteral stent fragmentation. In most fractured stents, many leukocytes were identified in the urine, with or without infection; this might lead to depolymerisation of biomaterials. On inspection of fragmented stents, these fracture lines generally pass across the stent side holes. Therefore, the incidence of ureteral stent fracture can be decreased by eliminating these holes. Management of fractured stents depends on where the fragments retained, can be managed by retrograde approach using ureteroscope or...
We had a rare case of fragmented double-J ureteral stent in a 46-year-old male patient. KUB image showed the retained double-J stent. We used a combined treatment for removing the fragments. Our patient was discharged in a good health.

4. Conclusion

Patients with insertion of double-J ureteral stents should be educated about the complications of missed stents inside the body. Scheduled visits after urological interventions with insertion of ureteral stents should be the standard for all patients.

References

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