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Neglected double J stent for 8 Years with giant bladder calculi formation: A case report

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ABSTRACT

Double-j ureteral stents have been widely used as part of urologic practice. The main use is to provide urinary drainage from the kidney to the bladder. With the increase use, several complications are seen related to stents. We present a 17- year-old male with neglected double-j stent for eight years after right pyelolithotomy. He skipped follow up. An open surgery for extracting bladder stones and removing the encrusted double-j stent is done successfully. In conclusion, neglected double-j stent for a long time leads to major complications such as extremely encrustation, stone formation and renal hydronephrosis.

Introduction

Since the advent of double-j stent in 1978, indwelling ureteral stents have been used on patients with calculus disease in order to bypass obstruction or internal drainage.[1] During the last decade, significant improvements have been made in stent design and material in order to reduce complications.[2] However, serious complications such as migration, fragmentation, encrustation, and stone formation still occur, especially when stents are left in place for long periods. Furthermore, a neglected stent is very frequently complicated and poses a management and legal dilemma.[2]

In this paper we provide a description of a case study of a patient with neglected double-j stent that had been placed eight years previously.

Case presentation

A 17-year-old low socioeconomic background male presented to our out-patient clinic.

Department of urology, Aleppo University Hospital with intermittent right flank pain and irritative lower urinary tract symptoms that began seven months ago. A detailed history was taken. The past medical history of the patient shows that eight years ago, the patient underwent pyelolithotomy surgery for the right renal calculus in another hospital. Then, a double-j stent was placed. The patient skipped the follow-up during the Syrian crisis until his presentation to our clinic. On examination, he was afebrile and moderately ill.

The results of the laboratory tests were normal including serum Cr 1.1 mg/dl. Urinalysis showed 100 RBC/HPF, excess white blood cells, and 1+ crystal.

Abdominal and pelvis ultrasound revealed a moderate to severe right hydronephrosis with a shadow of double-j.

An X-ray KUB image showed right calcified double-j ureteral stent with encrustation and formation of two large bladder stones (Fig. 1).

After that, intravenous urography was done. IVU revealed moderate to severe right hydronephrosis and delayed exertion of contrast with two cm bladder calculus encrusted along lower end of double-j stent (Fig. 2).

Subsequently, the treatment decision was based on the clinical presentation and diagnostic imaging findings. Cystolithotomy was done for bladder stones as well as removing the encrusted stent (Fig. 3). Surgical approach was lower midline abdominal incision to reach inside the urinary bladder. We extracted the first large stone easily. The second one was integrated to the stent and pulled the double-j stent with it during the extraction. We did not insert a new stent. The other stones in the renal parenchyma treated conservatively with analgesics.

Discussion

The double-j stent is a therapeutic option for different urological conditions.[3] It allows urinary drainage from the kidney to the bladder and is considered generally safe and well tolerated.[4]

Serious complications such as encrustation, migration, stone formation, fragmentation, and infection can be seen if the stents have been placed for a long time.[5] The presentation of forgotten stent varies.

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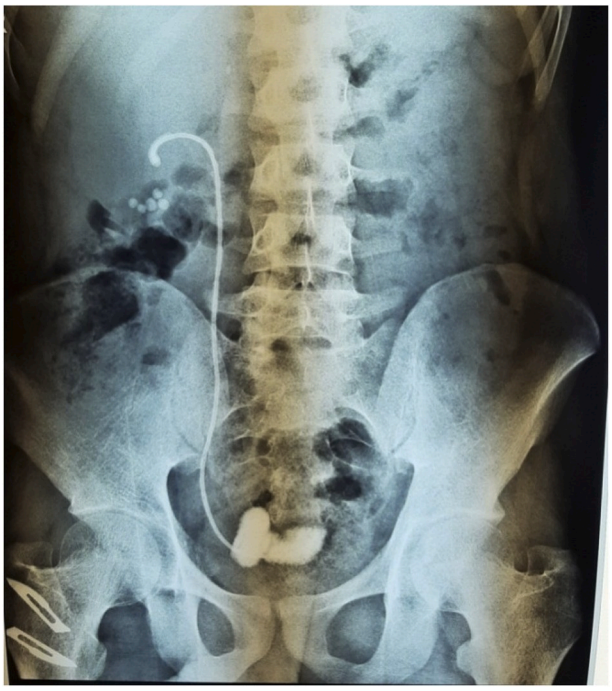

Fig. 1. KUB shows calcified Dj.

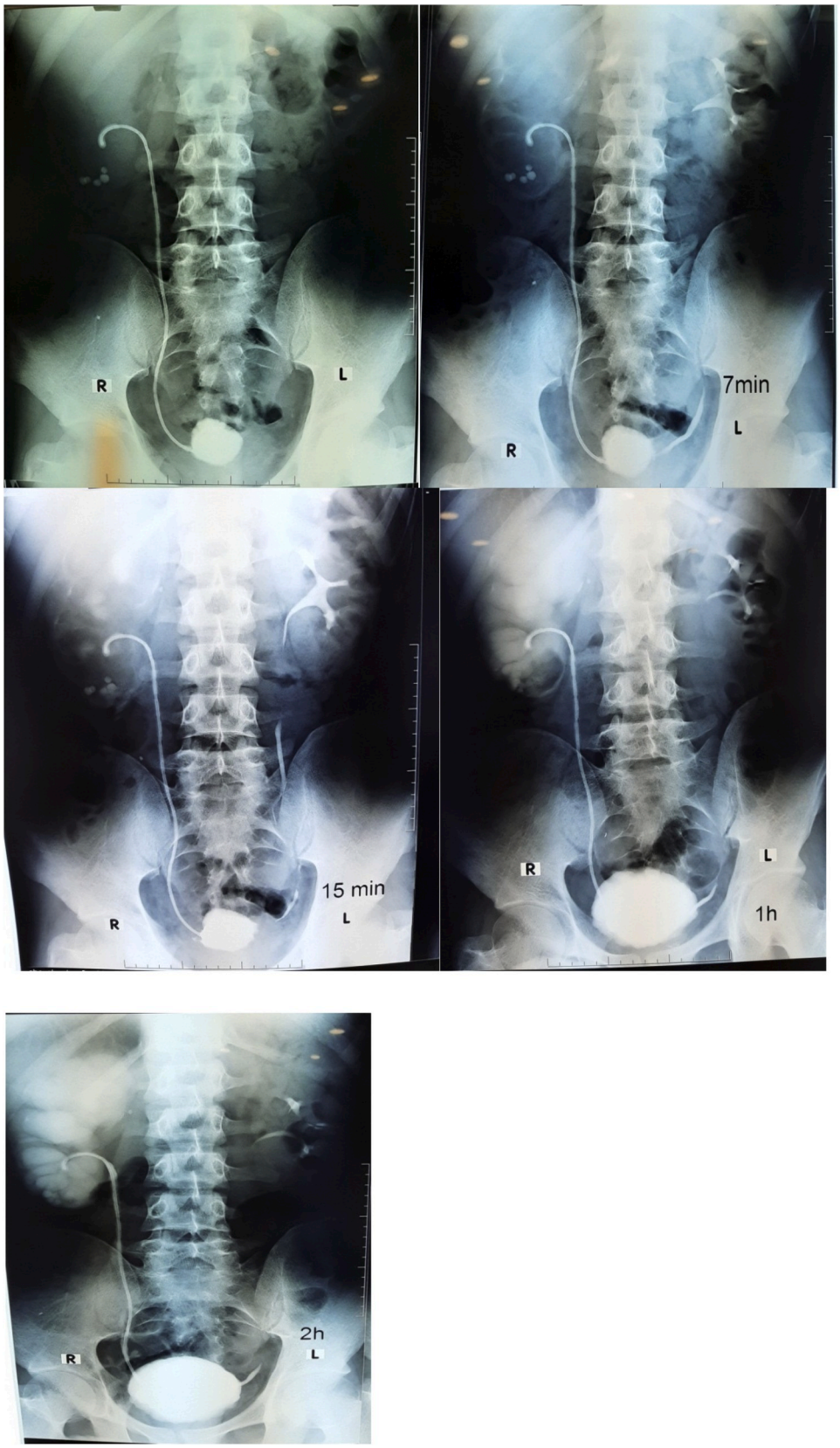

Fig. 2. Intravenous pyelography.

Fig. 3. The DJ with two stones.

Damiano et al. observed flank pain in 25.3%, irritative bladder symptoms in 18.8%, hematuria in 18.1%, and fever in 12.3%, of the patients. It is believed that the asymptomatic patients are more inclined to neglect or to forget about their stent.[4]

The management of retained and calcified double j stent represents a surgical challenge for the urologist in spite of the morbidity and mortality to the patient.

We documented a case of a neglected double-j stent for eight years. Long period of time leads to encrustation of the stent and two large bladder stones formation.

Open surgery was the definitive successful therapy for our patient. Later, the patient improved and we discharged him.

Conclusion

Neglected double-j stents are a major challenge to the urologist and may need several approaches to remove. With the wide use of ureteral stents today, patient's education about the morbidity and mortality of neglected double-j stent is the main issue that should be taken into consideration to avoid serious complications.

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