

Knotted ureteral catheter in an 83-year-old man: case presentation and urological non-invasive management in the elderly

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Abstract Ureteral catheters are important devices in the management of upper urinary tract obstruction; severe complications due to insertion or stent permanence are unusual. We report the clinical case and management of a knotted ureteral stent in an 83-year-old man.

Keywords Ureteral catheters · Knot · Vaseline · Elderly

Introduction

Increased life expectancy of the whole population has led to a widespread use of catheterization, mainly dealing with urethral obstruction of the aging male [1].

Ureteral catheterization is common in modern urological practice; complications are rare but may include encrustation of the stent, fracture, ureteral erosion and development of an uretero-arterial fistula [2].

Knotting of the extremity of urological catheters is a possible complication [2–8] that has to be promptly recognized in case of unsuccessful removal.

Case report

We report the case of an 83-year-old man affected by advanced symptomatic metastatic hormone-refractory prostate cancer, and previously submitted to urinary diversion

(uretero-cutaneous anastomosis) for bladder cancer. He attended our Department for Periodic Ureteral Stent Substitution. During the last procedure, the removal of the right catheter (7 Fr) turned out to be difficult, and only the distal end and the medium portion were extracted from ureteral cutaneous anastomosis. Suspicion of ureteral stones, concretions or knot formation, we avoided any forceful traction of the stent. Sterile vaseline was pushed up gently with a 10 ML syringe through the cutaneous stoma.

The catheter was softly rotated and weak traction applied.

Stent removal turned out to be successful with this approach, and the presence of a knot in the proximal portion was clearly evident (Figs. 1, 2). Then the patient received five days of antibiotic prophylaxis. Neither ureteral injury nor urinary infection was recorded.

Discussion

With the aging phenomenon and the increased incidence of urological cancer, the number of patients with urinary stomas has widely extended.

Knotting of the extremity of urological catheters represents a rare but possible complication [1–8] that has to be promptly recognized in case of unsuccessful removal. The physical basis of this phenomenon may be related to excessive length of the ureteral catheter, and this evidence is true during both urethral and ureteral device insertion [7, 8]. When the knot is formed at the distal end, the removal is simpler and often uncomplicated [7].

In the case of knot development of the proximal end of the catheter, the use of a rigid guide wire inserted retrogradely or a percutaneous approach have both been used successfully [2, 6].

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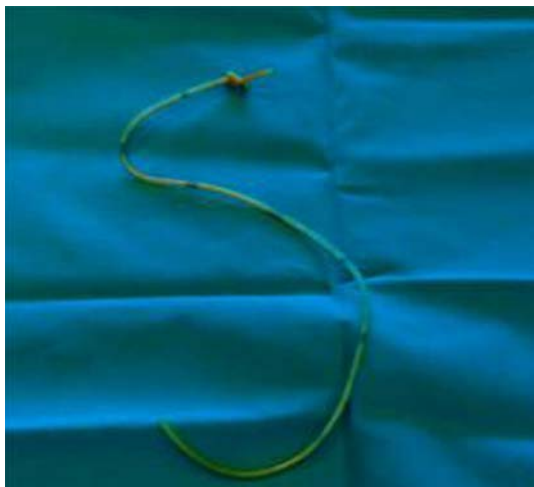


Fig. 1 Knotted ureteral catheter



Fig. 2 Knot in the proximal

In our patient the combined use of soft but sustained traction and rotation lubricated by vaseline was helpful in allowing extraction of the catheter without damage to the ureter on this occasion.

Conclusion

Knotting of ureteral catheters in uretero-cutaneous stoma is a rare event, previously described only in few cases; a conservative non-invasive approach with mild traction, rotation and use of vaseline is advised to face with this uncommon but potentially dangerous complication.

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