

# Spontaneous Knotting Of Suprapubic Catheter – A Rare Complication And A Rare Cause Of Retained Suprapubic Catheter.”

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## Citation

M Mir, B Bali, W Hamza. *Spontaneous Knotting Of Suprapubic Catheter – A Rare Complication And A Rare Cause Of Retained Suprapubic Catheter.*”. The Internet Journal of Urology. 2012 Volume 9 Number 2.

## Abstract

We report a case with retention of suprapubic catheter due to its spontaneous true knotting which is a rare complication and a rare cause of retained suprapubic catheter. The rare complication of intracystic knotting of catheters can be avoided by having thorough anatomical knowledge and meticulous technique of catheterization and decatheterization.

## INTRODUCTION

Urinary bladder catheter complications may include allergic reaction to the catheter material, Haematuria, infection, septicemia stone formation and urinary bladder perforation. Hence, urinary bladder catheterization is associated with minor complications like allergic reaction to major complications like urinary bladder perforation<sup>1</sup>. However, rare complications like fractured catheter and retained catheter may also occur. A retained catheter may be due to encrustation on the catheter and failure to deflate the balloon. A rare cause of the retained catheter is the spontaneous true knotting of the catheter on itself<sup>2</sup> as is also found in our case. Sometimes there may be knot with the two catheters each other in case there is either urethral and suprapubic or suprapubic and ureteric or urethral and ureteric catheters<sup>3,4,5</sup>.

## CASE REPORT

A 37 year old rural married male from north Kashmir, with past history suggestive of road traffic accident with urethral trauma presented with acute retention of urine with retained suprapubic Foley's catheter. The patient was unable to pass urine through previously traumatized urethra. General physical examination of the patient was normal. Abdominal examination revealed urinary bladder filled with urine. An attempt to deflate the catheter bulb failed. Ultrasonography revealed a full urinary bladder with intact inflated bulb of catheter. The bulb was punctured under ultrasonographic guidance but catheter could not be removed. The patient was shifted to the emergency theatre, suprapubic cystostomy

widened with the knife under local lidocaine infiltration anesthesia and the suprapubic catheter removed with the knotting on itself at the intracystic part of the catheter (figure 1 and 2). Another suprapubic catheter placed and secured. The patient was discharged from hospital on the second post operative day after observation for other complications.

## Figure 1

Figure 1. Knotting of suprapubic Foley's catheter photograph while its removal



**Figure 2**

Figure 2. Knotting of suprapubic Foley's catheter photograph after its removal



**DISCUSSION**

Spontaneous knotting usually occur with smaller size less than 10 F catheters and more than 10cm intravesical catheter length and hence, suprapubic catheters and per urethral catheters in females are at more risk of knotting. Knotting of catheter is a rare complication with an estimated incidence of 0.2 per 100000 catheterizations<sup>6</sup>. Only about 40 cases have been so far reported in world literature<sup>7,8</sup>. Catheter knotting not only complicates an otherwise simple procedure, but also incur additional physical and financial burden on the patient and additional non invasive procedure for the removal of retained knotted catheter is needed. The possible mechanism behind a catheter knotting is the excessive length of more than 10 cm of the catheter in the bladder forming a coil. When bladder decompresses the catheter end loops through the coil and counter traction at removal of catheter tighten the coil ending up in a knot<sup>7,9</sup>. In

the literature review the common factor in all the cases was excessive intravesical length of the catheter<sup>7,9</sup>. Water-current generated by the flow of urine appears to play an important role in the pathogenesis of catheter knotting<sup>7</sup>.

**CONCLUSION**

The rare complication of intracystic knotting of catheters can be avoided by having thorough anatomical knowledge and meticulous technique of catheterization and decatheterization.

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