

## BLADDER STONE FORMED ON THE SEGMENT OF BOTH ENDS CUT FOLEY CATHETER

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**Summary:** A case of bladder stone, formed on the 8 cm segment of both ends cut Foley catheter, is presented. This phenomenon is the first to the best of our knowledge.

**Key Words:** Bladder stones, Foreign body calculus, Complication of urethral catheter

Various foreign bodies can cause stone formation in the urinary tract. Here we report a case of bladder stone formed on the segment of both ends cut Foley catheter.

### Case Report

A 70-year-old man was admitted to our clinic in April 1989 for evaluation of straining during urination and intermittent terminal hematuria of three-year duration. Two years prior to admission the patient was advised to undergo an operation due to urinary retention, but he had refused the operation and began to carry out irregular intermittent self-catheterization. It was understood from the story that he had cut off the tip of his catheter, including the balloon, to improve drainage. During the pilgrimage in 1988 the catheter was secured by the patient to remain in situ, but it was obstructed. Since the patient could not urinate he tried to pull the catheter out without success and cut off the stretched end of it. Then he pushed the remained segment back by another catheter into the bladder. After this event the patient resumed to carry out irregular intermittent self-catheterization until his admission.

On rectal examination the prostatic gland was found enlarged and of benign structure. Urinalysis revealed an alkaline urine reaction with pH 8 and numerous white and red blood cells per high power field. Urine cultures yielded *Pseudomonas aeruginosa*-50.000 organisms per milliliter.

Plain abdominal film revealed a calcific density around a crescent-like radiolucent line in pelvis (Fig.1). Excretory urograms were unremarkable except for bladder trabeculation of mild degree and prostatic indentation corresponding to the concave edge of this density. The measured residual urine was 150 milliliters.

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Figure 1. Plain abdominal film shows a calcific density around a crescent-like radiolucent line in pelvis.

The patient underwent a transvesical prostatectomy and the prostatic adenoma weighing 50 g with a crescent-like, white, fragile bladder stone were removed. The stone was 9x2 cm in size. When the stone was broken, an 8 cm segment of both ends cut 16 F Foley catheter was found to be the nucleus (Fig. 2). Analysis of the stone revealed calcium and ammonium carbonate, phosphate and uric acid. Convalescence was uneventful. Postoperative urine cultures remained sterile.

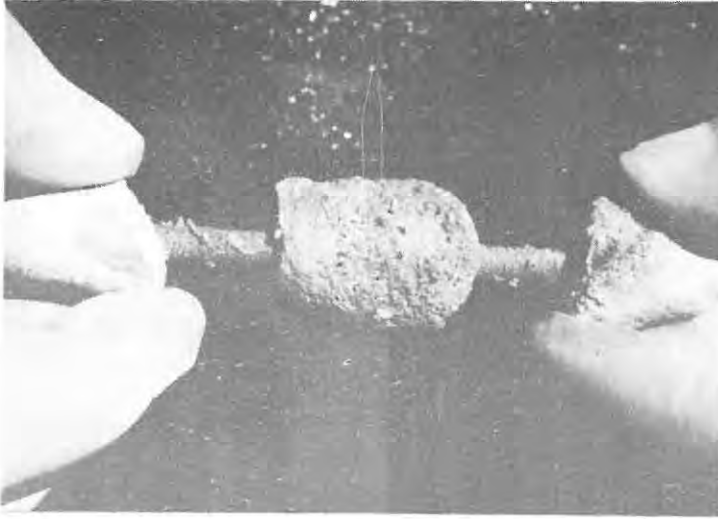


Figure 2. Stone fragments around stretched catheter segment.

## Discussion

Foreign bodies in the urinary tract may act as a nucleus for calcium deposition and stone formation. Urinary infection with urea-splitting organisms especially promotes formation of struvite stones in the patients with residual urine(1,2).

In the presented case the urinary infection caused by irregular, not clean, intermittent self-catheterization and infravesical obstruction led an alkaline urine reaction. Most probably, catheter was obstructed because of the dehydration due to hot weather and urinary infection during his pilgrimage.

To the best of our knowledge the bladder stone having such a nucleus does not appear to have been reported previously.

## References

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