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A Bladder Calculus on a Long Standing Foley Catheter - Neglected for Six Years

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Abstract: ***Stone formation in urinary bladder is common in the presence of foreign body. Here we are presenting a case who was previously operated (urethroplasty) for urethral stricture six years back. Patient was young and presented with suprapubic pain and pericatheter leakage. Radiological examination revealed a stone in the bladder. On operation a large stone was found engulfing the tip of Foley catheter which was retrieved intact.***

Keywords: Foley catheter, bladder stone

1. Introduction

Foreign bodies may reach the urinary bladder by one of the following modes-iatrogenic, perforation from adjacent organs, via the urethra or the traumatic route1. A long list of different types of foreign bodies in the bladder is reported in the literature for example—(a) thermometer2, (b) bullets3.(c) IUCD4, (d) encrusted sutures5 (e) surgical staples with stones6 (f)broken pieces of endoscopic instruments7, (g) electric wires8, (h) chicken bones 9, (i)wooden sticks 10, (j) retained urethral catheter11, (k) tip of ureteric catheter11.

The presence of foreign body like tip of Foley catheter in urinary bladder acts as a nidus for crystal aggregation, proliferation, urinary tract infection and stone formation.Foley catheter kept for long durations are followed by complications such as bacteriuria, encrustations by mineral salts, non deflation of balloon, pericatheter leakage, trauma, stone formation etc.

We are presenting a case where a calculus is formed around a Foley catheter which was neglected for six years.

2. Case Report

A thirty years old male patient came in surgery O.P.D. for complaints of lower abdominal pain and peri- catheter leakage of urine. On enquiring about his past history, patient informed that he was operated six years back for difficulty in micturition and thin stream. He had undergone urethroplasty operation for urethral stricture six years back in our hospital. He was advised to come after one month for removal of catheter. Patient did not turned up; neither had he visited any other doctor for removal of catheter. Due to monetary constraint he did not turned up for follow up for six years.

Patient came with torned distal end of Foley catheter.

On Examination

Patient `s general condition was good and his vital parameters were normal. Patient was with Foley catheter in situ. Suprapubic tenderness was present and there was pericatheter leakage. Suprapubic dullness was absent.

Investigation

X-ray KUB shows a large radio –opaque shadow in the bladder region.

3. Management

Patient was given spinal anaesthesia. Urinary bladder was opened. A large stone was found engulfing tip of Foley catheter. As the tail end of Foley catheter was torned by the patient himself, urinary stone with Foley catheter was removed intact from bladder. A retropubic drain was given and a fresh Foley catheter introduced for one week. Patient was passing urine normally after removal of catheter. Patient was advised to come regularly for follow up.

4. Discussion

Urinary bladder calculi are common in the developing countries. Long standing foreign body in the bladder causes infection. Duration of foreign body e.g. catheter, is the most important risk factor for the development of infection which occurs at an increased incidence of approximately 10% per day. Stone formation on a foreign body is a common complication. Bacteria attach to the foreign body like catheter, forming a bio- film and secrete an extra cellular polysaccharide matrix of bacterial glycosides. This matrix leading to encrustation of the catheter lumen. Triple phosphate (struvite) stones are formed around foreign bodies introduced in the bladder. The nidus for such a calculus is a urea splitting bacterium or a shed cell from the bladder lining. Elimination of ureas producing micro-organisms is required for reduction of urinary pH to prevent catheter encrustation. Good catheter hygiene, including aseptic catheter insertion and sterile continuous closed drainage systems, is necessary to minimize the introduction of micro-organisms into the bladder.

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5. Conclusion

Difficult operations done well may be followed by unexpected serious complications due to negligence for follow up by patients. So patients should be advised for strict follow up for success of operation.

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Photograph No 1: Patient Presented with Torned Foley Catheter.



Photograph No 2: X-Ray Showing a Radio –Opaque Shadow



Photograph No 3: Bladder Stone on the Tip of Foley Catheter

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