

Free Floating Eight Hem-O-Lock Clips in the Bladder Presenting Three Years After Robot Assisted Radical Prostatectomy: A Case Report

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ABSTRACT

Hem-o-lock clips (HOLC) are commonly used in robot assisted radical prostatectomy (RARP) due to their ease of application and secure clamping. We present a rare case of 65 years male presenting with LUTS three years post RARP. Radiological imaging suggested presence of multiple radiolucent vesical calculi. Cystoscopic evaluation revealed all eight hem-o-lock clips freely floating in the bladder. These were removed by cystoscopic forceps.

The HOLC provide athermal hemostasis near the neurovascular bundle during RARP. However, in some cases the clips may migrate intravesically and manifest late with LUTS as in our case.

Introduction

Hem-o-lock clips (HOLC) are increasingly being used in robot assisted radical prostatectomy (RARP) as they provide a fast and secure method of athermal hemostasis in areas where suture ligation is difficult. There have been a few case reports of HOLC migrating into the bladder and causing symptoms. We describe the presentation, management of our case, and discuss the possible preventive methods.

Case Report

A 63 year old gentleman underwent RARP in Oct 2013 for T2N0M0, Gleasons 4+3, prostate cancer. The immediate and late post operative period was uneventful. His nadir serum PSA level was 0.2ng/ml.

Three years later he presented with irritative LUTS in the form of dysuria, diurnal and nocturnal frequency and urgency with occasional urge incontinence. Urine analysis and culture revealed sterile pyuria. An abdominal sonography and X-Ray study suggested the presence of multiple mobile vesical calculi of variable size ranging from 3 mm to 12 mm (Figure 1A and B). His S. PSA level was 0.3ng/ml. A CT Urography confirmed the presence of multiple mobile vesical calculi (Figure 1C).

With the clinical and radiological diagnosis of vesical calculi, a cystoscopy was planned. The vesico-urethral anastomosis was intact. The bladder neck was open. To our surprise, cystoscopy showed 8 mobile and encrusted HOLC freely floating in the bladder (Figure 1D). The clips were successfully removed using cystoscopic forceps (Figure 2). Post operative period was uneventful

and patient was discharged next morning. The encrustations around the HOLC were composed of calcium oxalate and uric acid on chemical analysis. On follow up after 3 months, his irritative lower urinary tract symptoms have subsided and he continues to be on regular follow up for Ca Prostate.

Discussion

During RARP, HOLC are used for ligation of the vasa deferentia, seminal vesicle arteries, and prostatic pedicles. The use of HOLC, besides its advantages, is not free of complications. There are many isolated case reports of migration of HOLC after robotic or open procedures into the urethra, bladder [1], or rectum [2].

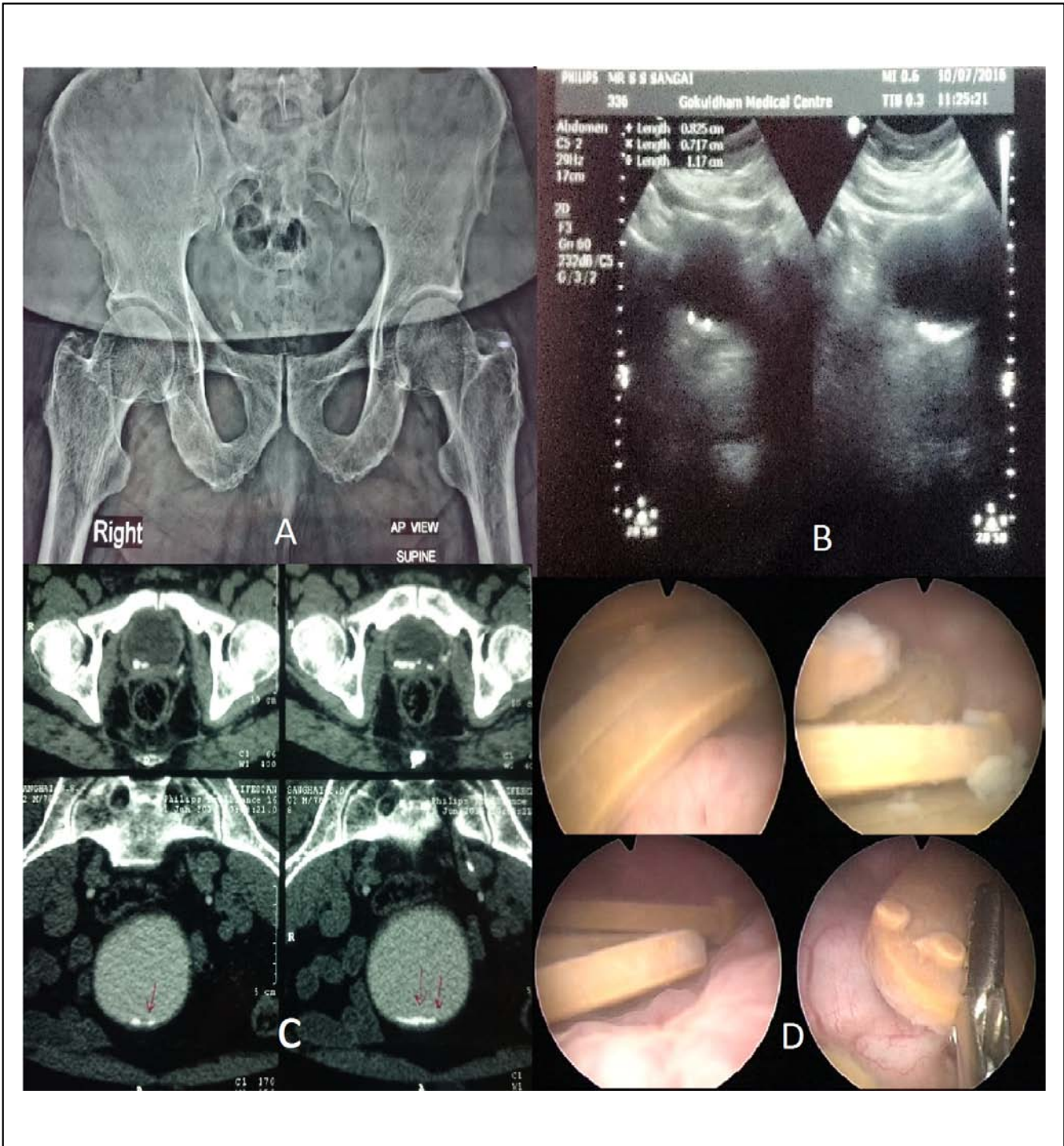


Figure 1: A, B, C Radiological investigations suggesting vesical calculi. D. Hem-o-lock clips confirmed on cystoscopy.



Figure 2: Eight encrusted hem-o-lock clips retrieved from bladder.

Blumenthal et al. [3] and Yi et al [1] evaluated more than 600 cases of radical prostatectomy and suggested clip migration may contribute to bladder neck contracture seen after radical prostatectomy. Cormio et al [4] have also reported bladder neck contracture leading to stress urinary incontinence due to Hem-o-lock clip migration after RARP.

Most of the authors have reported migration of one or two clips into the urinary tract. Shin et al. [5] described a case of four HOLC floating in the bladder without stone formation. However, in our patient all the eight clips used along the course of neurovascular bundle from seminal vesicle to prostatic pedicles had migrated intravesically. This complication occurred in one of 466 RARP conducted.

Conclusion

The HOLC provide athermal hemostasis near the neurovascular bundle region during RARP. However, they are not without complications, clip migration into the urinary tract is reported. This may subsequently lead to complications like bladder neck contracture (commonest), calculi formation, and incontinence.

Diagnosis warrants high index of suspicion as the HOLC are radiolucent, and the irritative bladder symptoms often overlap with those of the RARP itself. Cystoscopic evaluation of the lower urinary tract provides an effective diagnostic as well as therapeutic procedure providing immediate symptomatic relief. Inadvertent use of HOLC near the vesico-urethral anastomosis should be avoided. Any loose or free lying clips should be actively

searched for and retrieved from the abdomen for prevention of their migration.

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