

Migration of urolift clip into the bladder causing haematuria 3-years after insertion: a rare delayed complication of prostatic urolift

Abstract

Prostatic UroLift placement as a minimally invasive technique for the treatment of bladder outlet obstruction due to benign enlargement of prostate has been well accepted in literature and is practised with minimal post-operative complications. We present an unusual cause of haematuria due to migration of one of the prostatic UroLift clips into the bladder after 3 years from its insertion and its subsequent endourological management. To our knowledge, delayed migration of UroLift clip causing haematuria has not been reported in literature in the past. Urologists should be aware of this possible situation while dealing with patients with UroLift implanted.

Keywords: urolift, haematuria, benign prostatic enlargement

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Introduction

Prostatic UroLift has gained popularity as a minimally invasive alternative for surgical treatment of benign prostatic enlargement over the last decade.¹ The efficacy and safety of this procedure have been well established in various studies including cases involving enlarged median lobe.² Re-treatment rates in 5 years was only 13.6% with sustainable improvement in symptoms, quality of life (QOL) and urinary flow rate.³ In terms of complications, only few minor self-limiting post-operative complications were noted with markedly shorter hospital stay and preservation of sexual and ejaculatory functions that adds cutting edge to this newly devised technique.⁴ We present an unusual cause of haematuria due to delayed migration of one the UroLift clips into the bladder causing trauma to the bladder mucosa. To our knowledge, haematuria due to delayed migration of the prostatic UroLift clip into the bladder has not been published in literature.

Case presentation

Eighty-seven-year-old gentleman non-smoker presented to our clinic with one month history of painless visible haematuria. He had past history of lower urinary tract symptoms for 12 years which was initially managed with combination therapy of tamsulosin and finasteride for about nine years. After an initial improvement, his symptoms started deteriorating again. Three years back, he was offered surgical treatment, when he chose to undergo the prostatic UroLift procedure. On cystoscopic examination he had bilateral enlarged kissing lateral lobes and a small median lobe. Four UroLift clips were placed carefully on the lateral lobes, well away from the bladder neck under local anaesthesia and the procedure was uneventful. He was advised to continue the finasteride. The gentleman responded satisfactorily to the treatment with sustained good urinary flow and no bothersome urinary symptoms till now. He developed atrial fibrillation in the meantime and was started on anticoagulant by his cardiologist.

As protocol for management of haematuria, we planned for routine blood and urine investigations, flexible cystoscopy and urinary tract imaging. His full blood count, coagulation profile and renal function were normal. His mid-stream urine showed evidence of haematuria

but no leukocyturia. His imaging did not reveal any evidence of malignancy. On flexible cystoscopy, anterior urethra and prostatic fossa were normal. Areas of UroLift clips on the prostatic fossa were seen unaltered. At 7 o'clock position on the right lateral side just proximal to the bladder neck one metallic clip was found protruding out towards the lumen of the bladder Figure 1(a). Rest of the bladder was normal with no evidence of any malignancy. We planned for rigid cystoscopy under anaesthesia to remove the metallic clip. With the help of endoscopic forceps (cold-cup forceps) we held the clip and pulled it till the entire clip and a small length of the thread was visible Figure 1(b). We used Holmium laser (1J, 30Hz) to cut the thread flush to the bladder mucosa Figure 1(c). The entire clip with the attached thread was removed Figure 1(d) and haemostasis at the site was secured. We kept urethral catheter overnight and removed the catheter on the next day. He voided well and was discharged. On subsequent telephonic follow-up at one month and three month he was not having any further haematuria or bothersome lower urinary tract symptoms.

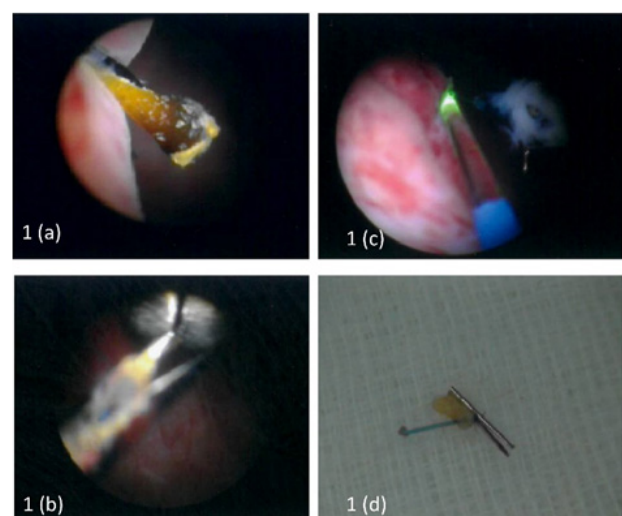


Figure 1(a) UroLift clip projecting into the bladder.

Figure 1(b) UroLift clip pulled with forceps into the bladder.

Figure 1(c) The thread attached with clip is lased with the Holmium laser.

Figure 1(d) The removed UroLift Clip.

Discussion

Complications of prostatic UroLift placement are generally minor in the form of pelvic pain, dysuria, urgency, urinary tract infection, haematuria, retention etc.^{1,4} All of them are transient and are usually resolved by two weeks.^{1,4} Roehrborn et al in their L.I.F.T. study⁴ emphasised on the proper placement of the clips away from the bladder neck in the prostatic fossa and the operating surgeon should double check the position at the end to make sure that no clip is projecting into the bladder. Wrongly placed clip in the bladder may lead to clip encrustation whereas clips in the prostatic fossa are never encrusted as they do not come in contact with the stored urine in the bladder. The same author in the follow-up of L.I.F.T. study³ described ten cases of encrusted clip removal from the bladder due to inadvertent placement of clip at or very near to the bladder neck which was picked up in routine cystoscopy at 12 months follow-up as a part of study protocol. However, the authors did not propose a routine cystoscopy at 12 months to check this problem and concluded that clips should be at least 1.5 centimetres from the bladder neck and if inadvertently placed should be removed immediately and reinserted properly. In our patient, we have placed the clips well away from the bladder neck in the prostatic fossa and have inspected the bladder and the prostatic fossa subsequently for any clip protruding into the bladder.

Few rare complications of UroLift have been reported in the literature. Colemeadow et al.⁵ reported one case of vesico-ureteric junction obstruction due to inadvertent clip placement that had led to even calyceal rupture on the ipsilateral side. Pollock et al.⁶ and Ewing et al.⁷ had separately reported incidence of large pelvic haematoma following placement of UroLift. Kang J⁸ recently described a case of bladder stone after UroLift placement. The primary presenting complaint of our patient was haematuria three years after the placement of the UroLift. On cystoscopic examinations the prostatic fossa was wide open. Shrinkage of the prostate gland on long term finasteride may be a possible factor that has resulted in tissue remodelling and migration of the clip which must have abraded the adjacent bladder mucosa to cause the haematuria. Endoscopic removal of the clip can be done successfully with use of laser to cut the thread attached with the clip.

The case is a reminder for the urologists about the delayed complications of UroLift placement. Haematuria as a delayed

complication of UroLift clip migration may be taken into consideration if the patient had past history of UroLift placement.

Conclusion

Urologists should be aware of the rare delayed complication of UroLift clip migrating into the bladder that may present as haematuria.

Acknowledgments

None.

Conflicts of interest

None.

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