CASE REPORT

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An Unexpected Nidus of a Bladder Stone: Latex Fragment of a Blasted Retained Urethral Foley Balloon

Mesane Taşı Olan Bir Olguda Beklenmeyen Taş Nidusu: Balonu Patlatılarak Çıkartılmış Üretral Foley Kateterin Balon Artığı

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ÖZ

Mesane taşı oluşumunda birçok etiyolojik sebep yer alabilir. Mesane içerisinde yabancı cisim varlığı bu nedenlerden biridir. Bu yazıda, daha önce çıkartılamayan bir üretral foley kateterin, balonunun patlatılarak çıkartılması neticesinde mesanede kalan artık bir lateks fragman üzerinde meydana gelmiş mesane taşlı bir olguyu sunuyoruz.

Anahtar Kelimeler: Lateks fragman, mesane taşı, yabancı cisim

ABSTRACT

Bladder stones can be caused by multiple reasons. Foreign bodies in the bladder is one of them. In this paper, we are reporting a bladder stone that formed onto a latex fragment of a blasted retained urethral Foley catheter's balloon.

Keywords: Bladder stone, foreign body, latex fragment

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INTRODUCTION

Bladder stones can be treated successfully with endourological techniques unlike Hippocrates. Foreign bodies in the bladder may cause stone formation. Herein a case of bladder stone that formed onto a teared fragment of a Foley urethral catheter's balloon is reported.

CASE REPORT

A 65 years old male patient consulted to our hospital's emergency service with urinary retention. An attempt to place a 16 Fr urethral Foley catheter was failed. Suprapubic 12 Fr cystostomy catheter was placed under ultrasonographic guidance. Ultrasonography revealed a three cm bladder stone. After that the patient accepted to the Department of Urology and definitive endoscopic treatment under spinal anesthesia was planned.

In the history, there was a prior transurethral resection of prostate six months ago in another hospital. After the operation patient was discharged with urethral catheter and instructed to admit hospital five days later for urethral catheter removal. But patient went to control two months after his discharge for removing the urethral catheter. According to the history the catheter could not be displaced at the first attempt and they blasted the balloon with inflating it. Two months after this event difficulty in urination was started. And eventually he was unable to urinate and consulted to our hospital's emergency service with urinary retention.

Surgery

Cystoscopy under spinal anesthesia revealed a pinpoint urethral stricture at bulbous urethra. Short stricture was incised with cold knife under direct vision internal urethrotomy. After that a three centimeter bladder stone was revealed in the bladder. Holmium:YAG laser was used for transurethral cystolithotripsy. Immediately after starting lithotripsy, edge of an unexpected latex fragment was noticed at the center of the stone (Figure 1).

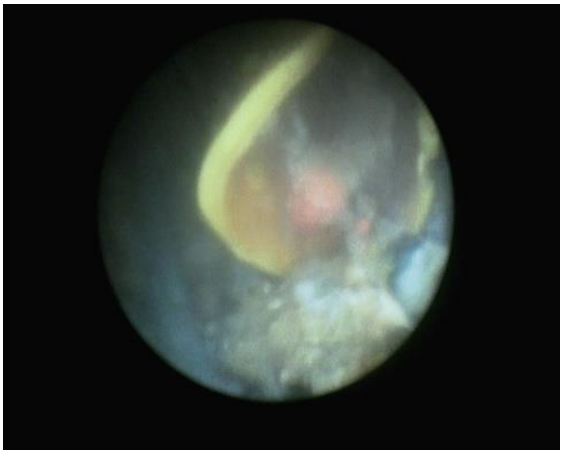

Figure 1. Edge of latex fragment at the centre of bladder stone

According to patient's history, it was thought that this latex piece was teared from the prior Foley catheter during the blasting attempt. The stone around the latex was broken into fine pieces and it was observed that the latex piece was about 0,5 centimeter in the length. It was removed with grasping forceps and an 18 Fr Foley urethral catheter was placed for a week (Figure 2). After removing the catheter, patient urinated with normal flow rates.

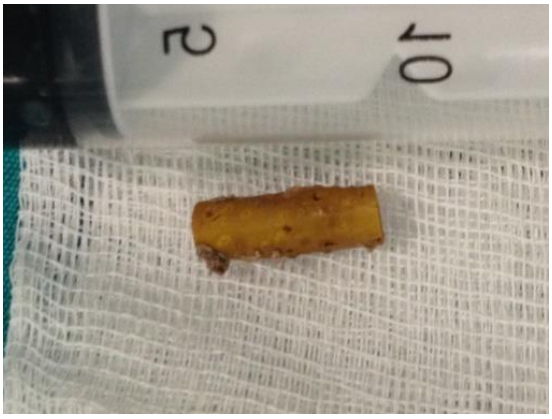

Figure 2. Latex fragment after displacement

DISCUSSION

Bladder stones may be caused due to bladder outlet obstructions, urinary infections especially with Proteus mirabilis, protein malnutrition in childhood and foreign bodies in bladder.[1] Foreign bodies in the bladder is infrequent and in the literature they are reported as case

series. In the literature, various foreign bodies in the bladder have been described as iatrogenic or self-introduced.[2] Crystals existing in the urine aggregates on to them and calculus formation occurs. In our patient, nidus for calculus formation was an unexpected iatrogenic foreign body; latex fragment.

In the literature, different types of foreign bodies in the bladder have been reported. Sometimes they occur because of misbehavior of patients with psychiatric illnesses. Electrical wire cable and intravesical thermometer are adequate examples for both psychiatric illness and autoerogenic cause of bladder foreign body.[3-5] Another cause of it is migration of intrauterin devices into bladder.[6] After pelvic surgical procedures like vascular surgeries with grafts, sling surgeries for urinary incontinence and hernia repairs, sutures or synthetic foreign bodies can be recognized in bladder.[7] Latex fragment that teared from balloon of a Foley urethral catheter as a nidus of bladder stone was the intravesical foreign body in our patient.

When foreign bodies in the bladder are early recognized, calculus formation does not occurs around them. But stone formation almost always occurs in the late recognized cases. Bladder stone formation around foreign bodies following incontinence surgeries and a migrated ventriculoperitoneal shunt into bladder are existing in the literature.[8,9] Calculus formation has been occurred around the foreign body in our case.

Abdominal ultrasonography (USG) and computed tomography (CT) are being used for the diagnosis of intravesical foreign bodies.[10] We recognized the bladder stone during percutaneous placement of suprapubic cystostomy under direct vision of USG, but the foreign body was recognized during cystolithotripsy.

Treatment of bladder stones or intravesical foreign bodies are generally performed with endosurgical techniques. Bladder stones around them can be fragmented with pneumatic or Holmium:YAG laser lithotripters, small stone pieces can be flushed with fluids and foreign bodies can be removed via urethra. However, sometimes it is not possible via urethra. In these cases, open removal can be a choice especially for magnetic foreign bodies.[11] And also single-port transvesical excision of intravesical foreign body is reported in the literature in rare cases.[12] Holmium:YAG laser lithotripsy was performed for the treatment of bladder stone and the latex fragment was displaced with endourological stone forceps in our case.

Nondeflating balloon is the most common cause of a retained Foley catheter.[13] There are various techniques for the treatment of nondeflating balloons. Some of them are; inflating the balloon with water, air or some chemicals, using a wire through the balloon port, cutting the balloon port of the catheter, suprapubic or transvaginaly puncturing of the baloon under direct vision with ultrasonography and puncturing the baloon under direct vision transurethrally.[13-15] Chemicals like ether, chloroform, acetone and mineral oilcan be used for deflating or blasting retained Foley balloons.[14] These chemicals except mineral oil can be toxic for bladder epithelium. Currently, using chemicals for displacing the retained Foley balloons is not rationale while having today's technological facilities. According to patient's history, the balloon was inflated and blasted in our case, but we do not know whether a chemical was used or not.

In conclusion, this case, it is understood that a latex fragment can act as a nidus for bladder stones. No matter which method is used for blasting balloons of retained Foley catheters, unity of it must be checked via ultrasonographically or endoscopically after the procedure. Otherwise teared latex fragments can cause calculus formation in bladder. Endosurgical techniques are the main treatment alternatives both for bladder stones and intravesical foreign bodies.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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