



Suture Related Iatrogenic Bladder Stone

Sütür Nedenli İatrojenik Mesane Taşı

Hikmet Köseoğlu, Ramazan Yavuz Akman

Başkent University Faculty of Medicine, Department of Urology, İstanbul, Turkey

ABSTRACT

Iatrogenic suture materials within bladder cavity related to previous bladder surgeries or others with proximity to bladder may cause stone formation around themselves. This phenomenon has been well characterized with experimental animal studies. Though care related to choice of suture and technique of suturing is taken for, still such cases are reported after both urological and non-urological surgeries. In this report, such a case that had been operated for incontinence previously is presented for stone formation around the suture material within bladder cavity together with radiological examinations and endoscopic visualizations.

Key Words

Suture, iatrogenic, bladder, stone

ÖZET

Geçirilmiş mesane cerrahilerine veya mesane komşuluğundaki diğer cerrahi işlemlere bağlı mesane lümeni içerisindeki iatrojenik sütür materyali etrafında taş oluşabilmektedir. Bu olgu deneysel hayvan çalışmaları ile iyi bir şekilde tanımlanmıştır. Ancak sütür materyali seçimindeki ve sütür atma tekniğine dikkat gösteriliyor olmasına rağmen bu tip olgular ürolojik ve ürolojik olmayan cerrahiler sonrasında bildirilmektedir. Bu olgu sunumunda inkontinans cerrahisi öyküsü bulunan olgudaki sütür materyali etrafındaki taş oluşumu radyolojik ve endoskopik görüntüler ile birlikte sunulmaktadır.

Anahtar Kelimeler

Sütür, iatrojenik, mesane, taş

Introduction

Stone formation due to suture materials within the bladder cavity has been well characterized with experimental animal studies (1,2,3). Though care related to choice of suture and technique of suturing is taken for bladder related surgeries and others with proximity to bladder, still such cases are reported after both urological (4,5) and non-urological surgeries, mostly incontinence surgeries (6,7,8,9,10,11). In this report, such a case is presented together with radiological examinations and endoscopic visualizations.

Case Presentation

A 75 year old lady was referred to urology clinics for recurrent urinary tract infections and intermittent hematuria episodes during last few years. She was complaining dysuria, hematuria and frequency on admission. Her medical history was uneventful except few gynecological operations. She had been performed total abdominal hysterectomy and bilateral oophorectomy 25 years ago and cystocele repair 10 years ago. After diagnostic workup, the abdominal ultrasonography and plain abdominal X-ray scan revealed 25 mm bladder stone (Figure 1). Cystoscopy was performed and 25 mm bladder stone was visualized as hanging down at the

left posterolateral side of the bladder (Figure 2). During litholopaxy, a suture material appeared within the body of the stone (Figure 2). The suture material was visualized as hanging down the bladder wall after removal of the stone around it (Figure 2). The suture material was removed endoscopically (Figure 2). After procedure, her follow up was uneventful and no further urinary tract infection was detected.

Discussion

Animal studies have well depicted that the most important property of suture materials leading to bladder stone formation is their non-absorbability (1,2,3). Either inappropriate suture technique leaving non-absorbable suture in bladder or replacement of suture material in to the bladder cavity due to tissue is the reason of iatrogenic suture within bladder. The suture material acts as a nidus for aggregation of crystals and eventually stone forms around it. Some urological and non-urological surgeries with proximity to bladder have been reported to have such a complication (4,5,6,7,8,9,10,11). Non-urological surgeries are mostly incontinence surgeries including Marshall-Marchetti-Krantz operation, Burch colposuspension, laparoscopic colposuspension and even tension free vaginal tape procedure (6,7,8,9,10). In most of the procedures, as in our case, the suture materials were non-absorbable (4,6,7,8,9,10,11). However,

Correspondence

Hikmet Köseoğlu MD, Başkent University Faculty of Medicine, Department of Urology, İstanbul, Turkey

E-mail: hikmet.koseoglu@gmail.com

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Figure 1. Plain abdominal X-ray scan showing opacities in the pelvic region



Figure 2. (Left upper) Cystoscopy view of bladder stone hanging down at the left posterolateral side of the bladder (Right upper) During litholopaxy, a suture material within the body of the stone (Left lower) Suture after removal of the stone around it (Right lower) Stone fractures and suture material after procedure

iatrogenic bladder stone formation due to absorbable suture has also been reported after a urological surgery (5).

The cases mostly had lower urinary tract symptoms and/or hematuria after one to fourteen years of their related surgeries (5,6,7,8,9,10,11). However, it might be asymptomatic and diagnosed in postmortem study though huge bladder stone with size of 9x1 cm (4).

The treatment modalities mainly consist of endoscopic removal of stone and suture material as in our case.

Conflicts of Interest

There are no conflicts of interest.

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