

Migrated Burch Suture : A Case Report Presenting With Macroscopic Hematuria

Migrate Burch Sütürü: Makroskopik Hematüri ile Başvuran Olgusu

Abstract

Background: The mesh orsuture migrations have always been problematic situations and seen after several methods of stress urinary incontinence surgeries including both colposuspensions and mid-urethral sling interventions. The application of Burch colposuspension rather than mid-urethral slings has been increased in recent years due to mesh migration and other complication risks.

Case Report: 53 years-old female patient admitted with complaint of disuria and hematuria. She had a history of Burch colposuspension during abdominal hysterectomy and bilateral salpingo-oophorectomy six years ago. A cystoscopic evaluation demonstrated stones at 11 and 1 o'clock position on the bladder neck which occurred with existence of migrated suture material.

Conclusion: Suture migrations should always be kept in mind even in a patient with history of Burch colposuspension admitting with lower urinary tract symptoms. So, cystoscopic evaluation and detailed anamnesis are essentials especially in patients who had undergone mid-urethral sling, colposuspension or hernia repair surgeries.

Keywords: Burch, suture, migration, hematuria, cystoscopy.

Öz

Giriş: Meş veya sütür migrasyonları hem kolposüspansiyonlar hem de orta üretral askı teknikleri de olmak üzere çeşitli stres üriner inkontinans ameliyatlarından sonra görülebilen problemlerdendir. Bu nedenle son yıllarda orta üretra askı yöntemleri yerine daha sıklıkla Burch askı dikişlerinin kullanımı artmıştır.

Olgusu: 53 yaşında kadın hasta dizüri ve hematüri şikayeti ile başvurdu. Hikayesinden altı yıl önce abdominal histerektomi ve bilateral salpingo-ooferektomi sırasında Burch kolposüspansiyonu yapıldığı öğrenildi.

Tahsin Batuhan AYDOĞAN* 0000-0002-2000-7790

Mehmet EZER** 0000-0003-4422-6768

Emre HURİ*** 0000-0001-5563-4527

*Memorial Sisli Hospital, Department of Urology, Istanbul, Turkey

**Kafkas University, Department of Urology, Kars, Turkey

***Hacettepe University, Department of Urology, Ankara, Turkey

Yazışma Adresi: Tahsin Batuhan AYDOĞAN

Şişli Memorial Hastanesi,

Üroloji Bölümü, İstanbul

e-mail: drbatu@hotmail.com

Sistoskopik değerlendirmede mesane boyunu saat 11 ve 1 hizasında üzerinde taş bulunan migrate sütür materyalleri izlendi.

Sonuç: Alt üriner sistem semptomları ile başvuran Burch kolposüspansiyon öyküsü olan bir hastada sütür migrasyonu olabileceği daima akılda tutulmalıdır. Bu nedenle, sistoskopik değerlendirme ve ayrıntılı anamnez alınması özellikle orta üretra askı cerrahisi, kolposüspansiyon veya fıtık onarımı geçiren olgularda esastır.

Anahtar Kelimeler: Burch, sütür, migrasyon, hematüri, sistoskopi.

Background

Urinary incontinence (UI) is an important burden of health problem which also brings sociopsychological problems. In 2020, the incidence rate of overall UI is 21.9% and remission rate is 33.3% whereas the incidence rate of stress urinary incontinence (SUI) is 14.9% and remission rate is 37.9%[1]. There are two common and sometimes overlapping causes in SUI which are urethral hypermobility and weakness of urethral sphincter. Non-absorbable mid-urethral mesh slings are commonly preferred surgical interventional treatment modalities for SUI which have been defined as standard of care by American Urogynecologic Society. But with certain complications as mesh erosions and infections Federal Drug Administration (FDA) has been defending against common usage of them in the recent years[2]. This has increased the application of Burch colposuspension rather than mid-urethral slings in recent years. But still a mesh or suture migration has always been a problematic situation and seen after several methods of SUI surgeries including both colposuspensions and mid-urethral sling interventions.

Here we present a case who admitted with hematuria due to migration of Burch colposuspension sutures to the bladder neck and formed concomitant bladder stones. A written informed consent was signed by the patient for this case presentation.

Case Report

A 53 years-old female patient admitted with complaint of dysuria and hematuria.

She had no previous history of urinary system stones whereas had a history of total abdominal hysterectomy and bilateral salpingo-oophorectomy because of a malign cervical smear six year ago. The patient has been informed that during the surgical procedure they also performed a variant of concomitant colposuspension procedure. There were no history of adjuvant radiotherapy or chemotherapy. Her urine analysis and urine culture showed no findings of an infection. A plain graphy showed two opacities resembling bladder stones. Urinary ultrasonography documented 2 and 1 cm two hyperechogenic stones at the bladder close to the bladder neck. A cystoscopic evaluation demonstrated stones at 11 and 1 o'clock position on the bladder neck which occurred with existence of migrated suture material (**Figure 1**). Pneumotic lithotripsy was performed with Lithoclast Master™ (EMS SA Switzerland®) and N-gage™ basket (Cook Medical®) was used to collect the stone fragments. The migrated suture material was grasped and pulled outsidewith a foreign body forceps through 22 Fr cystoscope (Karl-Storz®).

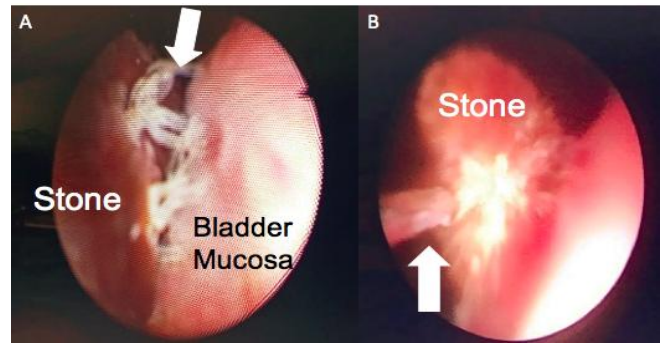


Figure 1. The demonstration and pneumotic lithotripsy of stone located on migrated suture material over bladder mucosa. (A) White arrow showing the migrated suture material at bladder neck. (B) White arrow demonstrating the pneumotic lithotripsy process.

Discussion

Hematuria and dysuria are most commonly seen lower urinary tract symptoms (LUTS). There are plenty of underlying pathologies showing initial presentation with LUTS. Differential diagnosis with a detailed medical anamnesis are essentials at this point. There are certain possible mesh or suture migrations due to hernia repairs, midurethral sling and colposuspension interventions. The initial mesh erosion to the bladder was published on 1994 which has been seen in a case with a pastlaparoscopic inguinal hernia repair[3].

From that time plenty of cases has been presented in literature with different underlying surgical interventions. There exists examples of mesh migrations related to Transobturator Tape (TOT) and Tension-free Vagina ITape (TVT) procedures in literature[4].

As for Burch colposuspension the procedure is mainly applied with a non-absorbable suture material which usually passes through the paravaginal fascia[4]. This seems to rule out any risk of mesh migration. However in 2017 Shapiro et al. described two cases of Burch colposuspension which has presented with delayed migration of suture material in to the bladder[2]. The cases were 67 years and 48 years old women who had undergone Burch colposuspension 10 and 6 years ago respectively. In both the cystoscopic evaluation demonstrated the migrated suture materials passing through the bladder mucosa.

The colposuspension procedures are essential to come over the SUI especially because of urethral hypermobility. In Burch colposuspension sutures only go from below to above to the Cooper ligament[5]. Easier application and lower complication risks supported Burch colposuspension in recent years. But still there exists a risk of suture migration in to the bladder. So the general recommendation for colposuspension surgeries is to provide a cystoscopic control at the end of procedures[5].

Conclusion

A good urogynecologic anamnesis and cystoscopy are still indispensable points during the hematuria evaluation. Suture migrations should always be kept in mind even in a patient with history of Burch colposuspension admitting with lower urinary tract symptoms.

Source of Finance

None.

Conflict of Interest

The authors have no conflicts of interest to declare.

Author Contributions

EH had substantial contributions to design. ME had contributions on acquisition and interpretation of the study. Drafting the work and final approval was performed by TBA.

References

1.Legendre, G., et al., *Incidence and remission of stress, urge, and mixed urinary incontinence in midlife and older women: A longitudinal cohort study*. Neurourol Urodyn, 2020. **39**(2): p. 650-657.
2.Shapiro, R., A. Hajiran, and S. Zaslau, *Delayed Presentation of Suture Erosion following Burch Colposuspension*. Case Rep Obstet Gynecol, 2017. **2017**: p. 8178361.

3.Gray, M.R., J.M. Curtis, and J.S. Elkington, *Colovesical fistula after laparoscopic inguinal hernia repair*. Br J Surg, 1994. **81**(8): p. 1213-4.
4.Tolosa Eizaguirre, E., et al., *[Development of bladder stone following a tension-free vaginal tape procedure: a case report]*. Actas Urol Esp, 2009. **33**(6): p. 700-2.
5.Sohlberg, E.M. and C.S. Elliott, *Burch Colposuspension*. Urol Clin North Am, 2019. **46**(1): p. 53-59.