

Urethral Rupture at a Minor Trauma Patient With in Car Traffic Accident

Araba Kazası Geçiren Minör Travmalı Hastada Üretra Rüptürü
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Özet

Üretral yaralanmalar, ürolojik travmaların %4'ünde görülür ve ciddi morbiditeye neden olurlar. Üretra yaralanmaları, üretranın uzunluğu ve anatomik hareketliliğin daha az olması nedeniyle erkeklerde daha yaygındır. Üretra yaralanmaları, motorlu araç kazaları, ateşli silahlar veya bıçaklar gibi penetran yaralanmalar, üretral prosedürlerden kaynaklanan yaralanmalar ve üretral darlıkların neden olduğu spontan yaralanmalar gibi durumlarda da görülebilir. Yirmi yaşındaki bir erkek hasta, araç içi bir trafik kazası sonrasında acil servise getirildi. Hasta minör travma geçirmişti ve hayatını tehdit eden herhangi bir yaralanma söz konusu değildi. Fizik muayenede skrotumda şişlik ve eksternal üretral meada kanama görüldü. Retrograd ürethrografiye bulbos üretra düzeyinde rüptür görülmüştür.

Anahtar kelimeler: *travma, skrotal ağrı, üretra rüptürü, acil departmanı*

Abstract

Urethral injuries occur in 4% of urological traumas and cause serious morbidity. Urethral injuries are more common in men due to the length of the urethra and the less anatomic mobility. Urethra injuries can occur as motor vehicle accidents, penetrant injuries such as firearms or knives, injuries caused by urethral procedures, and spontaneous injuries caused by urethral strictures. A 20-year-old male patient was brought to the emergency room after an in-car traffic accident. His trauma was a minor one and he has not had any life threatening injuries. Physical examination revealed scrotal swelling and hemorrhage at external urethral opening. At retrograde urethrography, rupture was seen at the level of bulbos urethra. Urethral ruptures may occur through minor traumas due to car accidents. If there is urethral injury suspicion at physical examination, urethral imaging should be done.

Keywords: *trauma, scrotum pain, urethral rupture, emergency department*

Introduction

Urethral injuries occur in 4% of urological traumas and cause serious morbidity. Urethral injuries are more common in men due to the length of the urethra and the less anatomic mobility¹. Urethra injuries can occur as motor vehicle accidents, penetrant injuries such as firearms or knives, injuries caused by urethral procedures, and spontaneous injuries caused by urethral strictures². Posterior urethral injuries are almost exclusively associated with pelvic fractures. Pelvic fractures are associated with urethral injury at 1.5-10% of patients, and 15% of these urethral injuries have simultaneous bladder injuries³. Our purpose in this case report is to emphasize that urethral injury may develop in patients presenting with scrotal pain after a minor trauma.

Case Report

A 20-year-old male patient was brought to the emergency department (ED) after an in-car traffic accident. No known additional illness or medication used. On presentation to the ED, he was alert with Glasgow Coma Score (GCS) of 15, cardiovascular parameters were stable with a heart rate of 90 per minute and blood pressure of

120/70 mmHg, afebrile with a temperature of 37.0 °C (Derece işareti sıfırın yanında üst tarafta olmalı. Ben yapamadım.) and had good respiratory effort with a respiratory rate of 12 per minute. In his statement, he said that while he was driving his car at a low speed he hit the car ahead of him, remembered the event, and had his seat belt attached. The patient did not report any complaints except scrotum pain. Physical examination findings of the head and neck, the thorax and the abdomen were normal. Genital examination revealed hemorrhage at external urethral meatus and swelling at the scrotum.

The emergency biochemistry and complete blood count values of the patient were normal. No pathology was detected in the brain and cervical tomography examinations taken to detect any possible damage. Scrotal ultrasonography was planned for the patient due to scrotal swelling and scrotum pain. On the right side of the scrotum, a hematoma of 27x23 mm was seen in the medial aspect of the testis. Bladder was full and tight, there was a 7x4 cm structure compatible with hematoma seen in the bladder.

In the re-examination of the patient, the swelling in the scrotum increased and hematoma developed to the perianal region. The patient was counseled by urology. Retrograde urethrography showed extravasation thought to be from the bulbous urethral level. The patient was admitted to urology department, cystostomy was performed and antibiotherapy was started.

Case Discussion

The urethra is 18-20 cm long in an adult male and extends from the internal urethral opening in the bladder neck to the external urethral opening. The male urethra consists of four different segments. Besides the anatomical differences, these segments also have some important functional differences. Four segments proximal to distal: the pre-prostatic urethra, the prostatic urethra, the membranous urethra and the urethral spongiosum⁴. Urethral injuries are anatomically divided into posterior or anterior urethral injuries. The posterior urethra consists of the prostatic segment and the membranous segment. The membranous urethra proximal to the perineal membrane is more easily injured than the prostatic urethra and bladder neck because it is the least anatomically supported part of the posterior urethra. The anterior urethra consists of the bulbous urethra, penile urethra and fossa navicularis. Bulbar segment of anterior urethra is anatomically more stable than penile urethra and is therefore more vulnerable to crushing injury. Distal to the bulbar segment, urethral injury is rare and is usually caused by trauma during sexual activity or during military or urban warfare¹. In our patient, retrograde urethrography showed extravasation at the level of the bulbous urethra.

Hematuria is a sign for urethral injury, but it is not specific. The amount of blood at external urethra shows a weak correlation with the severity of injury. Patients with complete rupture of urethra can come with little urethral hemorrhage. In addition, pain during urination or inability of urinate suggests urethral injury. In 80% of female patients who have pelvic fractures, blood at intraurethra can be seen⁵. Urethral bleeding can be seen in most of posterior urethral injury patients and anterior urethral trauma patients. Blood presence at external opening indicates that urethral instrumentation should not be performed until urethral imaging⁵. In our patient, there was blood at external urethral opening and swelling at the scrotum. We did not perform any urethral instrumentation before imaging.

Retrograde urethrography is considered the gold standard in the initial evaluation of urethral injury. Magnetic resonance imaging or suprapubic ultrasonography (USG) can be used for urethral stricture that may develop later. USG is not a routine study in the initial evaluation of urethral injuries⁵. In our patient, we used retrograde urethrography to detect urethral injury. We detected extravasation at bulbous urethra level.

Conclusion

In patients with minor trauma⁶ who are referred to emergency services, if there is blunt abdominal trauma or genital tract trauma, detailed genitourinary system examination should be performed. The appearance of blood in the external urethral opening suggests the presence of urethral injury. Urethral intervention should not be performed on these patients before the urinary system imaging is done.

References

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Information Presentation

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