

Testicular Torsion in an Adult Patient After Bicycle Riding

Erişkin Bir Hastada Bisiklete Binme Sonrasında Gelişen Testis Torsiyonu

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Abstract

Testicular torsion is one of the most common surgical emergencies in males. Bicycling is a possible and frequent cause of a variety of urological disorders including testicular torsion. The data regarding the association between testicular torsion and bicycling are limited to some case reports in young boys. Here, we report a case of testicular torsion in an adult, which occurred shortly after excessive, long-distance bicycle riding.

Key Words: Adult, Bicycling, Bicycle Riding, Testicular Torsion

Öz

Testiküler torsiyon erkeklerde en sık görülen cerrahi acil durumlardan birisidir. Testiküler torsiyon dahil olmak üzere çeşitli ürolojik bozuklukların olası nedenlerinden birisi bisiklete binmektir. Bisiklete binme ve testiküler torsiyon arasındaki ilişkiye dair veriler erkek çocuklarında görülen bazı olgu sunumları ile sınırlıdır. Burada erişkin bir hastada yoğun ve uzun mesafeli bisiklete binmekten hemen sonra oluşan bir testiküler torsiyon olgusunu sunmaktayız.

Anahtar Kelimeler: Erişkin, Bisiklet, Bisiklete Binmek, Testiküler Torsiyon

Introduction

Testicular torsion is one of the most common surgical emergencies in males younger than 25 years, with a calculated annual incidence of 1/4000 (1). Testicular torsion usually occurs in the absence of any precipitating event. On the other hand, some factors predisposing patients to testicular torsion are described: Testicular trauma, increase in testicular volume (often associated with puberty), testicular tumor, testicles with horizontal lie, a history of cryptorchidism, and a spermatic cord with a long intrascrotal portion (2). Bicycling is a possible and frequent cause of a variety of urological disorders including testicular torsion (3). The data regarding the association between testicular torsion and bicycling is limited to some case reports in young boys (4). Here we report a case of testicular torsion in an adult which occurred shortly after excessive, long-distance bicycle riding.

Case Presentation

A 50 year old male patient presented to our department with the complaint of severe left testicular pain for approximately 2 hours, which started just after excessive, long-distance (approximately 8 km) bicycle riding. He had no history of any comorbidities and drug use. General examination was normal. At scrotal examination the left testis was located high in the hemiscrotum, swollen, and tender, with an absent cremasteric reflex. The contralateral testis was normal. The complete blood count and urinalysis were normal. Colour doppler sonography (CDU) showed scant left testicular perfusion and increased perfusion of the thickened left scrotum wall, in comparison with the right testis. Manual detorsion by external rotation of the testis was successful and restoration of blood flow was confirmed by CDU following detorsion maneuver. Testicular fixation performed the same day. During left testicular fixation,

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the colour of the testis was almost normal and serous fluid in the vaginal sac and hematoma of the left epididymis was noted (Figure 1). Intraoperative CDU confirmed blood-flow in the left testis. Patient was discharged to home 2 days after the surgery. CDU was normal after 1 month follow-up. Patient written informed consent was obtained.

Discussion

Bicycle riding may cause some urological and andrological disorders caused by overuse injuries affecting the genitourinary system. Jackson and Craft (4) reported five cases of teenage boys presenting with torsion, all of whom described the onset of pain as starting during or shortly after completion of a bike ride. Anderson and Williamson (5) reported that bicycle riding was implicated in 3% of 670 cases with torsion.

Potential mechanisms of bicycling related testicular torsion are twisting of the testis between the thigh and the saddle by the up and down movements of the legs, vigorous contraction of the cremasteric muscles caused by strenuous effort, and exaggerated cremasteric reflex resulting from the cold air penetration during fast cycling (3). Also, the dropped handlebars tend to bring the legs closer up to the abdomen and increase the compression of the testis against the saddle (4). On the other hand, long-distance bicycling may result in testicular

trauma. Trauma is an infrequently reported precipitant of testicular torsion, usually accounting for only 5 to 6% in most series. It is considered that testicular trauma produces torsion through induction of cremasteric muscle spasm (6). Additional mechanism of bicycling-related testicular torsion may be the induction of cremasteric muscle spasm due to repetitive trauma to the testis between the thigh and the saddle during long-distance bicycling. In our case, no precipitant factor was found except bicycling. One may ask that why testicular torsion do not occur in professional bicyclers? Regular training and use of professional equipments and saddles may prevent professional bicyclers from torsion.

Bicycling is one of the possible causes of some urological disorders including testicular torsion. Excessive, long-distance bicycling may rarely result in testicular torsion in adults.

Ethics

Informed Consent: Patient written informed consent was obtained.

Peer-reviewed: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: A.E.C., S.B., Concept: A.E.C., S.B., Design: A.E.C., S.B., Data Collection or Processing: A.E.C., Analysis or Interpretation: A.E.C., Literature Search: A.E.C., Writing: A.E.C.

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Figure 1: The colour of the left testis was almost normal during fixation and hematoma of the left epididymis was noted