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Importance of Genital Examination: The Case of Overlooked Testicular Torsion

Genital Muayenenin Önemi: Gözden Kaçan Testis Torsiyonu Olgusu

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Abstract

Testicular torsion is one of the most important patologies among the genitourinary emergencies. Orchiectomy may be necessary in delayed cases. Our 2-year-old patient was hospitalized in an external center for 3 days due to abdominal and groin pain, nausea and vomiting. After discharge, he was brought to our clinic because of swelling and redness of the left scrotum which was noticed by his family. Abdominal examination was unremarkable except tenderness in the groin, swelling and hyperemia of the left scrotum, and painful and edematous left testicle on palpation. Pulsating color filling and blood flow were not observed during color Doppler US of the testicle. The patient was taken to emergency surgery with a preliminary diagnosis of the torsion of the left testicle. The patient underwent left orchiectomy because of intraoperative detection of a black necrotized testicle due to referral to our urology clinic after a delay of more than 72 hours following the onset of the incident.
For a male patient applying with a stomach ache, testicular torsion should be considered as differential diagnosis and a complete physical examination, including the genital area, should be performed.

Keywords: testicular torsion, abdominal examination, child

Özet

Testis torsiyonu genitoüriner aciller arasında en önemli patolojilerden biridir. Gecikmiş olgularda orşiektomi gerekli olabilir. İki yaşındaki olgumuz karın ve kasık ağrısı, bulantı ve kusma nedeniyle 3 gün dış merkezde yatarak tedavi görmüş. Taburcu olduktan sonra ailesi tarafından fark edilen sol skrotumda şişlik ve kızarıklık nedeniyle kliniğimize getirildi. Karın muayenesinde kasıklarda hassasiyet, sol skrotumda şişlik ve hiperemi ve palpasyonda ağrılı ve ödemli sol testis dışında özellik yoktu. Testisin renkli Doppler US'sinde pulsasyonlu renkli dolum ve kan akımı gözlenmedi. Hasta sol testis torsiyonu ön tanısı ile acil ameliyata alındı. Olayın başlangıcından 72 saatten fazla bir süre geçtikten sonra üroloji kliniğimize sevk edilmesi nedeniyle intraoperatif olarak siyah nekrotize testis tespit edilmesi nedeniyle hastaya sol orşiektomi uygulandı. Karın ağrısı ile başvuran bir erkek hastada ayırıcı tanı olarak testis torsiyonu düşünülmeli ve genital bölge de dahil olmak üzere tam bir fizik muayene yapılmalıdır.

Anahtar kelimeler: testis torsiyonu, karın muayenesi, çocuk

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Figure 1. Intraoperative view of testicular torsion

Figure 2. Torsioned testicle with orchiectomy

Introduction

Stomach ache does not usually require surgical intervention, and it may be felt secondary to disorders associated with extra-abdominal organs [1,2]. Testicular torsion is an emergency situation that causes severe scrotal pain [1]. Torsion of the spermatic cord is a rare disease often seen in adolescent males. It is seen in 1/4000 of the male population under the age of 25, but this rate is estimated to be below the actual frequency of testicular torsion. While sudden scrotal pain concludes classical clinical manifestations of the spermatic cord torsion, pain may be less severe and the set up may be slower in some of the children. In addition to scrotal pain, increase in scrotal volume, scrotal rash, pain in the lower quadrant of the abdomen, nausea and vomiting may accompany the clinical picture [3].

In this study we present a 2-year-old case with abdominal pain that was treated as an inpatient at an external center but after his discharge his parents noticed swelling and rash of the left scrotum. Then he was operated with preliminary diagnosis of testicular torsion and his severely impaired testis was removed. Presentation of this case conveys importance in that it emphasizes the significance of a full physical examination including the genital area in patients manifesting with stomach ache.

Case

The patient treated as an inpatient at an external center with a stomach ache, nausea and vomiting 3 days before his application to our clinic was brought to our clinic upon his parents' noticed swelling and rash in the left scrotum. Abdominal examination of this 2-year-old male patient with no history of trauma was unremarkable except for mild tenderness felt on the groin. His left scrotum was swollen and hyperemic and the left testicle was painful and edematous on palpation. Emergency color Doppler ultrasonography revealed absence of left testicular blood flow. Then the patient was urgently operated. A black necrotized testicular tissue was detected during the surgical procedure **(Figure 1)** and the patient underwent orchiectomy upon more than 72 hours after the incident **(Figure 2).** Intact right testicle wasm fixated to the scrotum. Images were used in the case report after signed permission from the patient's family was obtained.

Discussion

Historically, hemiscrotal or testicle pain have been the most common symptom of testicular torsion. However in our study, testicular torsion emerging with a stomach ache without scrotal pain is remarkable in a way that it looks alike some of the intra-abdominal diseases such as appendicitis, gastroenteritis, peritonit but can be distinguished from them based on examination findings of genital area and scrotal color Doppler US. Since these patients are frequently evaluated by the doctors who have little knowledge about the specific symptoms of the testicular torsion, and rarely examine external genitalia often delaying the diagnosis.

Although etiology of the stomach ache in men with testicular torsion has still not known well, the probable causes of stomach ache in cases with testicular torsion can be listed as follows: (a) Anterior aspect of the scrotum are innervated by branches coming from L1, and posterior aspect by nerves stemming from S2 and S3. Besides that, the testicle is innerved by branches derived from spinal segments of T10 and T11 and the testicular pain can spread to abdominal organs commonly innervated by nerves coming from adjacent segments of the spine; (b) Intact, healthy testicles have a rich neural network, however probably some congenital testicular abnormalities in patients with testicular torsion may induce stomach ache; (c) The twisted spermatic cord evokes peritoneal response, and pushes it upward provoking stomach ache; (d) Stretched cremaster muscle pulls and stimulates the peritoneum [4].

Many researchers have focused on atypical clinical manifestations of the testicular torsion in children and adolescents. Anderson et al. [5] stated that 134 of 597 patients applied with a stomach ache that preceded and sometimes felt more severely than scrotal pain, and 29 of these patients applied only with stomach ache. While Mellick et al. [6] reported a 6-year- old boy who applied with an isolated stomach ache, Pogorelić et al. [4] stated in their study that 17 of the 84 patients with testicular torsion applied with a stomach ache, Mäkelä et al. [7] stated that 7 of the 100 patients with testicular torsion suffered from stomach ache. Gaither et al. [8] found out that 16 patients applied only with a stomach ache after analyzing malpractice cases of testicular torsion among court appeals from 1985 to 2015. Our case underwent inpatient treatment due to stomach ache, nausea

and vomiting persisting for 3 days and the diagnosis of testicular torsion is delayed.

The diagnosis of testicular torsion can be priorly done with physical examination. The examination of the external genitalia can mostly reveal the presebce of scrotal swelling and erythema, testicles sensitive to palpation and loss of cremasteric reflex. Santos et al. [9] suggested compulsary genital examination of the boys presenting with stomach ache.

Color Doppler US is routinely used to assess testicular blood flow. Indeed, color Doppler US can properly, and non-invasively demonstrate arterial blood flow and venous drainage in the center of the testicle. Mellick et al. [6] stated that color Doppler US is a reliable method to validate the diagnosis of testicular torsion.

Testicular torsion can cause severe testicular ischemia. When testicular torsion occurred, priorly venous blood flow is blocked, then testicular and epidydimal edema become manifest. If this blockage is not eliminated on time, the existing swelling continues to grow impairing blood flow to the testicular arteries. Fabiani et al. [10] believed that the time lapsed between the onset of symptoms and exploratory surgery represented the only prognostic factor for testicular viability. Testicular viability is negatively correlated with ischemia time. It is believed that the best time frame for successful testicular recovery is a time interval of less than 6 hours between the incident and surgical intervention [6]. If the torsion is managed within 6, 6-12 or 12-24 hours after onset of symptoms, 90-100%, 20-50%, and only 10% of the affected testicles can be saved, respectively. [4,6,7,11]. In our study the ischemia time was over 72 hours. When we compared the duration of ischemia with the published reports mentioned above, our results were consistent with the previous literature findings.

Conclusion

In a male patient applying with a stomach ache, testicular torsion should be considered as differential diagnosis and a complete physical examination, including the genital area, should be performed. A simple genital examination may provide early diagnosis, treatment and prevent organ loss.

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