CASE REPORT
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The Reason for the Rare Scrotal Mass in the Newborn: Antenatal Intravaginal Torsion of the Testis

Yenidoğanda Nadir Bir Skrotal Kitle Nedeni: Antenatal Intravajinal Testis Torsiyonu

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Abstract

Intravaginal testicular torsion is a very rare pathology in the neonatal period. However, it is seen most commonly torsion type in puberty. In this article, we presented a male patient with a scrotal hyperemia and an abnormal mass in the testis. According to the ultrasonographic examination, a patient had an antenatal intravaginal testicular torsion and no testicular blood flow was observed. This article was written to draw attention to the importance of neonatal examination and to remind us of testicular torsion which is a rare pathology in newborns with scrotal colour change or the presence of an abnormal mass.

Keywords: Testis, torsion, newborn, intravaginal

Öz

Yenidoğanda dünyadaki intravajinal testis torsiyonu çok nadir görülen bir patolojidir. Bu yazıda yenidoğan muayenesinde skrotal hiperemi ve ele gelene kitleye presente olan ve ultrasonografik incelemede testiste kan akının izlenmediği antenatal intravajinal testis torsiyonu erkek hasta güncel literatür eşliğinde sunulacaktır. Bu makale yenidoğan muayenesinin öneminin dijıkat çekmek ve yenidoğanda skrotal renk değişikliği veya kitle imaji veren durumları nadir bir patoloji olan testis torsiyonunun hatırlatmak amacıyla yazılmıştır.

Anahtar Kelimeler: Testis, torsion, yenidoğan, intravajinal

Introduction

Testicular torsion occurs most commonly in newborn and puberty periods. Newborn testicular torsion frequency is 6.1/100000 (1). Extravaginal torsion is frequently observed in undescended testicle cases and newborns while 95% of the testicular torsions seen during puberty except newborn are in the form of intravaginal torsion. Few cases have been reported in the literature on intravaginal torsion in the neonatal period (2,3). In this case study, there is an intravaginal testicular torsion as seen in puberty. This can be explained as that intravaginal torsion is characterized by congenital anatomical abnormalities such as a high attachment of the tunica vaginalis to the spermatic cord and an excessive laxity of gubernaculum tests. These events are named as “bell clapper deformity”. Intravajinally torsion is caused by the testis twisting within the tunica vaginalis. A child with an antenatal testicular torsion, which is a rare pathology, will be presented in this article.

Case Presentation

A 22-year-old mother gave birth to her second healthy child (3370 g) in the 38 weeks of her pregnancy. In the routine neonatal examination of the baby, the right testicular stiffness and size increase were determined and pediatric surgeon consultation was requested. In the physical examination, the left testis was normally palpated but hyperemia was observed in the right hemiscrotum skin and the size increase and stiffness were observed accordingly to the testis symmetry. According to the result of torsion, blood flow was not observed in the right testicular parenchyma. The parenchyma colour Doppler ultrasonography which was performed by the preliminary diagnosis of the testis was heterogeneous in appearance and its size was significantly increased compared to the symmetry (Figure 1). The patient was urgently operated. The operation started with the right inguinal transverse skin incision. It was observed during the exploration
that the right testis was intravaginally torsioned and testicular gangrene was observed (Figure 2). After detorsion, it was waited for about 15 minutes and parenchymal incisions were made on the testis. However, right orchiectomy was performed because there was no blood supply and the colour was still dark. Necrotic testis tissue was observed. The patient was discharged on the second postoperative day and he was followed without complication in the forth-postoperative month.

Discussion

Testicular torsion is the most important case among acute scrotum pathologies and it is a condition requiring immediate intervention (4). The survival of the gonad in testicular torsion depends on two important factors such as the grade and duration of the torsion. According to the experimental animal studies, it has been reported that 90 degree testicular torsion does not affect the circulation, and 180, 360, and 720 degree torsions lead to the permanent loss of the testis respectively within 3-4 days, 12-24 hours, and 2 hours (5). The 92% of newborn testicular torsions are extravaginal and 8% are intravaginal. This age group accounts for 10% of all testicular torsions (6). It is reported that 48% of newborn torsions are in the left side, 44% are in the right side, and 8% are bilateral (7). In this case report, the presentation of the torsion intravaginally and in the right side is a rare condition for this age group. The emergency surgical intervention decision in prenatal testicular torsion remains controversial. In studies, although the testis was preserved in approximately 22–33% of patients with postnatal testicular torsion with the help of the immediate surgical intervention, testes were not preserved in patients who had prenatal testicular torsion and who were urgently operated in the neonatal period were (8,9). Nandi et al. have indicated that the viability of testicles in neonatal torsion is generally at low levels. For instance, it has been shown in a review of 18 cases of 284 patients that the rate of preserved testis was approximately 9% (7). Scrotal-inguinal hernia, testicular tumour, epididymo-orchitis, appendiceal testis torsion, and testicular epididymal torsion should be considered in the differential diagnosis in the acute phase (10). In our case study, tumour markers such as alpha-fetoprotein and b-hCG were examined but no significant difference was found in this age group. However, it should not be forgotten that such markers may normally be found high in the newborn period and must be controlled for a while. Whether or not to fix the contralateral testis should be discussed during the surgical intervention with ipsilateral testis (9). It is also recommended that the fixation of the contralateral testis can be performed in the second session (3). In our study, no fixation was performed in the contralateral testis in the same session. Instead, fixation will be performed after the age of one in another operation in order to protect the contralateral testis from complications such as infections. In conclusion in the case of scrotal colour change and the presence of the abnormal mass, testicular torsion should be kept in mind and surgical treatment should be provided.

Ethics

Informed Consent: Written informed consent was obtained from patient parents who participated in this study.

Peer-review: Externally peer-reviewed.

Authorship Contributions


Conflict of Interest: No conflict of interest was declared by the authors.

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References


