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CASE REPORT

Extended English Abstract

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UNDESCENDED TESTIS WHICH WAS NOTICED IN ADOLESCENT- A TRAGIC APPLICATION PROCESS

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Abstract

Undescended testis is the most common genitourinary anomaly in boys. Early detection is important, it is easy to doubt but needs attention, it has the potential to cause serious problems. In this article, we discussed the importance of undescended testis as a surprise and delayed diagnosis in an adolescent male patient who applied to the family healthcare center for an irrelevant reason. The pathology of the patient was corrected by surgical intervention, but the success assessment will be carried forward in the future.

Keywords: *Undescended testis, adolescent, family healthcare center*
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Introduction

Congenital or acquired genitourinary diseases are quite common in boys. Undescended testis is the most common genitourinary anomaly in boys.[1] Its etiology is based on mother's and father's age, pre-pregnancy or gestational diabetes history of the mother, cryptorchidism history of the father, smoking, alcohol drinking, caffeine and painkiller intake history of the mother, environmental chemicals exposed by the mother in pregnancy, pesticides, etc. These reasons may lead to gonadotropin deficiency or insensitivity, testosterone deficiency and disorders in its synthesis, testis development defects, anatomic disorders, chromosome abnormalities, syndromes, etc. and the patient may be affected negatively in biopsychosocial aspects.[2-3]

Circumcision is one of the most frequent surgical interventions that are performed in accordance with cultural, religious reasons and relative medical indications. Turkish society place importance on circumcision of boys, and take care to organize some events after circumcision.[4]

In this article, we discussed the importance of undescended testis as a surprise and delayed diagnosis in an adolescent male patient who applied to the family healthcare center for an irrelevant reason and from whom informed consent

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was obtained, the requirement for not skipping testis examination of boys in the primary care and importance of the person that performs circumcision.

Case Report

The adolescent boy (11 years and 8 months old) who applied to the family healthcare center in order to receive a medical report to take up a sport activity on November 2018 didn't have an active complaint. During routine examination, testes didn't appear in the scrotum and inguinal region was swollen (Figure 1) while the right testis was non-palpable neither in the scrotum nor the inguinal tract, the left testis was non-palpable in the scrotum and palpable in the proximal zone of the inguinal tract, but it couldn't be taken down to the scrotum through manipulation. Pubic hair development had just begun, the penis size was approximately 7cm (Tanner phase 2) and he was circumcised. There wasn't axillary hair development. Height: 143 cm (50. p), Weight: 37 kg (50. p), other physical examination findings were normal.

Figure 1. Scrotal appearance during application

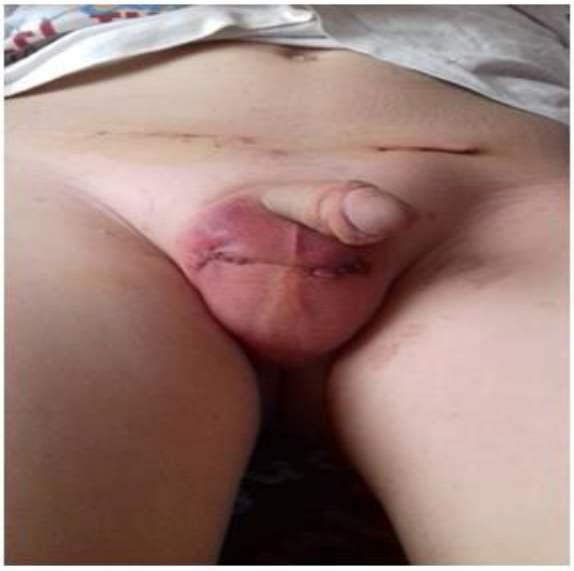

Figure 2. Scrotal appearance after orchiopexy

His prenatal, natal and postnatal history were normal, he didn't have any continuous medication or trauma history, it was found that he was circumcised by a person (conventional circumciser) who wasn't a doctor in his home when he was 6 years old as a traditional practice. There wasn't such diagnosis in his family history. Complete blood count, kidney and liver function tests, electrolytes, complete urine analysis of the patient who was referred to the pediatric surgery with the early diagnosis of undescended testis and examined there were normal. Hormone assays were indicated in Table 1 and were compatible with the age standards. According to the scrotal ultrasonography, the both testes were not observed in the scrotum and were located in the proximal zone of the inguinal tract. The right testis dimensions were 31x12x17 mm, the left testis dimensions were 28x11x16, and they were compatible with the age standards (Figure 3 and 4).

Table 1. Hormone analysis (Gynecology and Pediatrics Hospital Laboratory)

Parameter	Result	Unit	Reference
Free T4	1.13	ng/dL	-
TSH	2.59	mlU/mL	0.9-4.1
Total testosterone	50.14	ng/dL	10.0- 572.0
FSH	1.4	IU/L	1.4-18.1
IGF-1	211	ng/mL	95-500
Insulin like growth factor binding protein-3	5.58	ng/mL	-
Luteinize hormone (LH)	0.6	mIU/ml	-
IgA (Nephelometric or turbidimetric)	2.87	g/L	0.82-4.53

Bilateral testis and epididymis parenchymal echoes were normal. No pathologic findings were detected on peritesticular soft tissues or vascular structures. Bilateral orchiopexy operation was performed on the patient who was diagnosed with bilateral undescended testis in consequence of preoperative evaluation (Figure 2). No problem was observed in post-operative follow-up of the patient, and he was discharged from hospital by suggesting him to make dressing change, and he was told to go for a checkup three weeks later.

Discussion

Undescended testis is a disorder that is easy to doubt but needs attention and have potential to lead to serious problems. Distinction between the real undescended testis and retractile testis is also important, and whether the testis is palpable or not in physical examination and whether it can be taken down to the scrotum through manipulation, should be checked before deciding to perform surgery, that is retractile testis must be ruled out.[5] Family physicians and pediatrists are the physicians that must be influential in the diagnosis process. As the age of patients increase, prevalence of the undescended testis decreases.

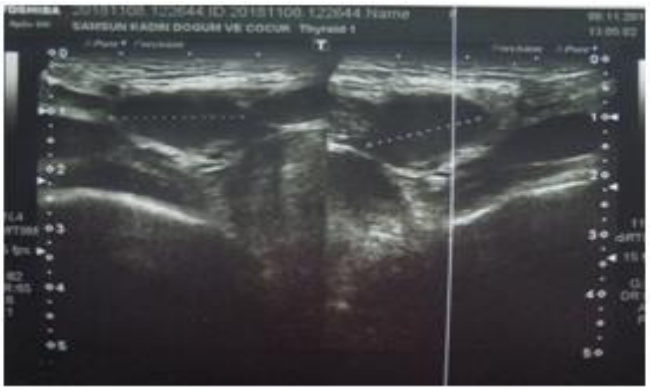

Figure 3. Right testis scrotal USG image

Figure 4. Left testis scrotal USG image

In the Updated American Urological Association Guidelines, it is stated that the possibility of descension of the testis that hasn't descended in the scrotum completely after the 6. month is too little, operation can be recommended until 6-18. month, and operation is inevitable later on.[6] The case is at an age that undescended testis diagnosis in accordance with physical examination and tests is delayed too much. The fact that the beginning of diagnosis process results from an irrelevant reason (request for medical report for sport activity) is more tragic. In literature review based on the age group of the patient, prevalence of the undescended testis in primary school students is 1.3% according to the study by Güzel.[7] According to the study by Adayener et al., the rate of undescended testis in adolescent children between the ages 13-15 is 0.83, the rate of bilateral undescended testis is 0.09%.[8] 50% of the undescended testes are is on the right, 40% of them is on the left, and 10% of them is bilateral. Bilateral undescended testis is frequent together with other congenital abnormalities.[2,9] According to these rates, the pathology in the patient is among the least prevalent cases, the fact that there isn't any additional pathology or congenital abnormality is good news.

Infertility and testicular tumor development are the most frightening consequences of this pathology. Hernia, torsion and psychological outcomes are other significant consequences.[7-9] The fact that the patient has not been faced with these problems is promising for his future. For undescended testis, there is a chance for treatment through hormonal therapy and surgical intervention. Success of the treatment decrease as the diagnosis is delayed.[10,11] In this case, only surgical intervention was made.

In article 3 of the Law on the Mode of Execution of Medicine and Medical Sciences no. 1219, it is stipulated that circumcision process can be performed by all physicians within the scope of general execution of medical sciences. Within this scope, the circumcision process is stipulated to be performed only by physicians; therefore circumcision process can be performed only by physicians with effect from 01.01.2015.[12] But sadly, the term 'conventional circumciser' has not vanished completely in our country. Particularly in the countryside, even in cities, individual or collective circumcision organizations by persons who are not physicians for a fee continue albeit at a diminishing pace. This is a sociological and medical problem. It results in biopsychosocial complications in children[12] and overlooking the cases such as the pathology in the patient. Performance of the circumcision process by a physician enables to detect some potential pathologies.

Consclusion

Everyone should bear responsibility in detection of this pathology. Parents are required to have a part in the process, observe their child scrutinisingly, and consult a physician when needed. It is compulsory for primary care physicians

to provide their patients with service by performing a full examination. Health policies should be determined in a way to set enough time for physician examination, and steps should be taken to lessen unnecessary workload. Besides, performance of circumcision operations by relevant physicians in a healthcare facility enables a full health assessment in boys. Parents must not trust 'conventional circumcisers' and report them. In addition to this, public education in this matter is one of the primary protective services of the state, and it must be generalized.

Acknowledgments
None

Conflict of Interest
All Authors declare that there is no conflict of interest.

Compliance of Ethical Statement
Written informed consent form obtained from both hospitals [Informed consent (via Journal of Health Sciences of Kocaeli University informed consent form) was obtained from the patient]. It was taken with an information form explaining the scope. Ethics committee convened before approval of the study (09/08/2015-10840098-604.01.01-E.163). Participating nurses, about the purpose of the study and its roles along with its benefits He was informed. Maintaining the principle of volunteering, oral and written permissions were provided to participate in the study.

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None

Author Contribution
OÖ evaluated the case and wrote the paper; MU evaluated the case and made critical review.

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