

Transverse Testicular Ectopia (TTE): Case Report and Brief Review

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Abstract

Background and Aims: Transverse testicular ectopia (TTE) or testicular pseudoduplication is a rare anomaly in which both testis lies in one hemiscrotum. We present a case of 11-month old boy with transverse testicular ectopia that presented to our clinic with left inguinal hernia and a right non-palpable testis. Patient was operated on left herniotomy and transseptal orchiopexy after mobilization of spermatic cord. We also describe its embryology and management in brief, and review the previously reported cases.

Keywords: Transverse Testicular Ectopia, Testicular Pseudoduplication, Testis

Introduction

The testis may fail to descend completely along its normal path from retroperitoneum to scrotum (Cryptorchidism) or pass from external inguinal ring and deviate to one of these sites (Ectopia): femoral, contralateral scrotum, pubic, penile and perineal areas (1). Transverse testicular ectopia is one of these categories (2). In this rare congenital anomaly, both testis descend through a single inguinal canal and enter to same hemiscrotum (2). The patient usually presents with unilateral non-palpable testis and contralateral inguinal hernia in which both testis are in hernial sac (3). Herein, we present an 11-month-old infant with left inguinal hernia and contralateral non-palpable testis and review literature.

Case Report

An 11-month old male infant was brought with swelling in left inguinal area to our hospital. Infant's mother noted this swelling that was aggravated by baby crying and coughing since 2 months old. This

swelling disappeared during sleep. This patient was the second child. Despite contraceptive consumption (Norethindrone 0.3mg daily), his mother was become pregnant and recognized it at 3 months of gestation. His 2 years old brother and his father never had any urologic problem including cryptorchidism, etc.

The physical examination showed that the patient was 11 month old boy with 11 kg weight and well generalized appearance. His heart, lung and abdominal examination were normal. In external genital examination, right testicular cord was not been palpable in right inguinal ring but left testis was normally located in the ipsilateral hemiscrotum. The patient had undergone left inguinal herniotomy

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Figure 1. Both testes are in left hemiscrotum.



Figure 2. Each has separate vas and vessels.

on 25/12/2007, at the Ghaem Hospital, Mashhad University of Medical Sciences, Mashhad, Iran.

Then left cord was exposed after external oblique incision. During separation of hernial sac, we considered that both testes are attached together in the left hemiscrotum. Each testis had separate vas and vessels, however, both spermatic cords were attached together proximally. After separation and ligation of hernial sac, both testes had passed through left external inguinal ring and each testis had fixed in ipsilateral hemiscrotum subdartus pouch (Figures 1-4). For right sided orchiopexy, scrotum had perforated in midline as much as right spermatic cord diameter. Both testes volume were found normal. The patient was discharged on 29/12/2007 without



Figure 3. Each testis had fixed in ipsilateral hemiscrotum. any complication.

Discussion

Normal testis almost always is located in the scrotum at birth; however, ectopic testis is located in the different sites including superficial inguinal pouch, suprapubic, femoral, perineal, base of penis and transverse ectopia. Transverse testicular ectopia (TTE) is a rare but a known testicular ectopia (1). Lenhossek in 1886 described TTE for the first time (2). In this situation both testes are located in one hemiscrotum, meanwhile, there is empty scrotum on the other side (3). Until Golladay and Redman report in 1982 (3), 55 known cases of TTE were reported in the literature. However, Shamsuddin, Sarin, Nagdeve and recently Naouar claimed that above hundred cases have been reported (1, 4, 5). The oldest and youngest patients that have been reported in the literature are 77 years and 3 days old, respectively (2, 5, 6). Sadeghi-Nejad and Oates reported a case of bilateral testicular ectopia in a 34 years old male that



Figure 4. The scrotum after repair

was referred for male infertility evaluation (7).

The embryology of TTE remains undefined. Different hypotheses include adherence and fusion of developing Wolfian duct and defective development of ipsilateral gubernaculum, obstruction of internal inguinal ring preventing testicular descent on the ipsilateral side, testicular adhesion and traction on a testis by persistent müllerian structures (2, 5). Berg proposed the possibility of the development of both testes from the same germinal ridge. Kimura concluded that if both vasa deferentia arose from one side, there had been unilateral origin but if there was bilateral origin, one testis had crossed over (5).

Paternity has been reported in 50% of TTE (8). Malignancy rate is increased and similar to undescended testicle at 18% (6). There have been reports of Yolk sac tumor, seminoma, teratoma and embryonal carcinoma (5). Michael et al reported malignancy in six patients with TTE (7).

Debnath et al reported a 7 years old boy with tuberculosis in TTE testis (2).

The corrected diagnosis of this anomaly is revealed during herniotomy (1, 4). Non operative diagnostic modalities are herniography, arteriography, venography, CT scan, ultrasonography and recently MR imaging and MR venography (9). However, laparoscopy is the first choice for diagnosis and management of TTE and its associated anomalies (4).

The treatment of TTE is to evaluate the other associated anomalies and placement of ectopic testis into its anatomical position. In this regard we have done transseptal orchiopexy after the mobilization of spermatic cord and separation of hernial sac from it. Follow up is mandatory, with regard of carcinoma of testis and fertility.

Conflict of Interest

None declared.

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