Transverse Testicular Ectopia Treated by Transseptal Contralateral Transposition: Case Report

Introduction

Transverse testicular ectopia (TTE) is a well described, rare, congenital abnormality of testicular maldescent, in which both testes descend through the same inguinal canal, ending in one hemiscrotum. The diagnosis can be established by careful physical examination or ultrasound, or may be found incidentally during inguinal surgery. Persistent Müllerian duct syndrome (PMDS) may be associated with TTE (%20).

Case Report

A 2-year-old boy was admitted to our institution with non-palpable right testis, but 2 ovoids of testicular consistency were found in the left hemiscrotum. Both testicles were descended at physical examination. Ultrasonography confirmed 2 testicles in the left hemiscrotum.

Scrotal exploration through a vertical incision along the raphe identified 2 overlapping testis in the left hemiscrotum. The epididymides were in their normal position relative to the testes. Both testes were descended. However, the right testis was in a cranial position within the left hemiscrotum and its spermatic cord was felt to be tight.

Laparoscopy was done at this stage to evaluate the anatomy of the spermatic vessels and vasa deferentia. The right spermatic cord was seen to enter the left internal inguinal ring with the left spermatic cord, and the 'situs' of the gonads was confirmed (**Fig. 1,2**). No Müllerian duct remnants were detected and thus persistent Müllerian duct syndrome was excluded. It was also established that the vas deferens of the right testicle was short and would not allow repositioning into the right hemiscrotum via extraperitoneal/abdominal mobilization.

Each testis was placed in its contralateral hemiscrotum at the end of the operation (**Fig. 3**). Transseptal contralateral transposition provided tension-free orchidopexy for each testis.

Follow-up at 6 months confirmed that both testes were properly positioned in the scrotum and had a good consistency and blood flow as determined by Doppler ultrasound.

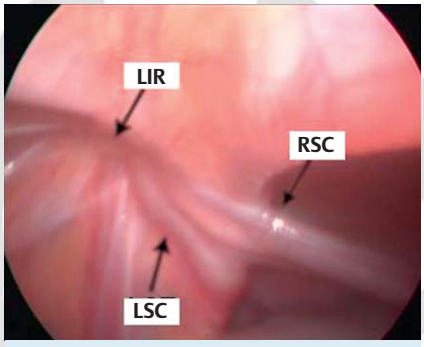

Fig. 1 Right and left spermatic cords were entered to left internal inguinal ring. RSC, right spermatic cord; LSC, left spermatic cord; LIR, left inguinal ring.

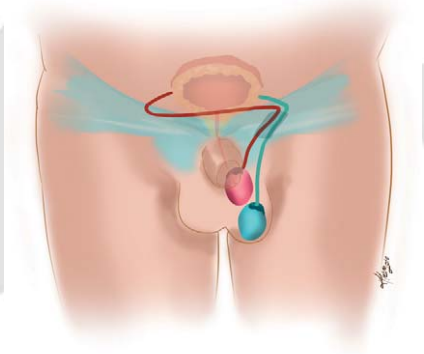

Fig. 2 Each cords entered to left internal inguinal ring. (By courtesy of Merve Evren).

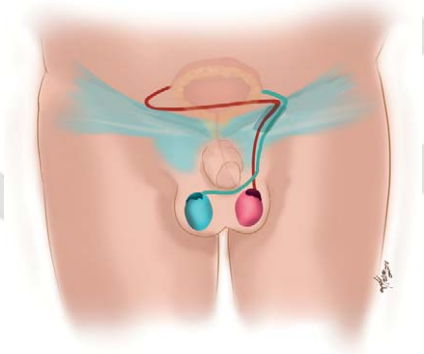

Fig. 3 Each testicles were placed to its contralateral position at scrotum. (By courtesy of Merve Evren).

Discussion

Transverse testicular ectopia (TTE) is a rare congenital abnormality of testicular maldescent, in which both testes descend through the same hemiscrotum. Etiological factors proposed for TTE include inadequate synthesis or secretion of Müllerian inhibiting factor (MIF), with persistent Müllerian structures causing traction on the testis [1]. Additional genitourinary anomalies may be present, so detailed urinary ultrasonography must be performed preoperatively [2]. Most cases are diagnosed intraoperatively during inguinal herniotomy (65%) [3].

Treatment options include testicular fixation, transseptal orchidopexy, diagnostic laparascopy and orchidopexy with laparoscopic mobilization. Transseptal orchidopexy is the most commonly preferred option to treat TTE [4]. Laparoscopy offers adequate exploration and definitive treatment in a single procedure with complete examination to rule out persistent Müllerian duct syndrome [5].

The spermatic cord of the right testicle was short and constituted the limiting factor in our case. We preferred to carry out transseptal contralateral transposition to provide tension-free positioning. The right testis was left in the left scrotum and the left testis was placed in the right scrotum at operation.

This is the first case report of transseptal 'contralateral transposition' in the literature. Laparoscopic assessment and measurements are mandatory to avoid functional loss in either testis, and laparoscopy alone permitted us to attempt this novel procedure. Transseptal contralateral transposition can be used to create tension-free orchidopexy in the treatment of transverse testicular ectopia.

Conflict of Interest: None

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