

Transverse Testicular Ectopia

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ABSTRACT

A case of transverse testicular ectopia of the left testis is hereby reported. A 5-year-old boy presented in surgical out-patient department with right inguinal hernia and impalpable testis in left scrotum and inguinal canal. Right herniotomy was performed. Left testis was found in right superficial inguinal pouch and brought to the left scrotum through transcepal window.

Key words: *Transverse testicular ectopia. Inguinal hernia. Persistent mullerian duct syndrome.*

INTRODUCTION

Transverse Testicular Ectopia (TTE) is an uncommon anatomical abnormality in which both the testis migrate towards the same hemiscrotum.¹ The patient usually presents with symptomatic inguinal hernia on one side to which the ectopic testis had migrated, and impalpable undescended testis on the other side. The ectopic testis may lie in opposite hemiscrotum, in the inguinal canal or at deep inguinal ring. The correct diagnosis in most of the cases is made during operation for repair of inguinal hernia. Patients usually presents at a young age.

This case report describes the uncommon condition in a young boy.

CASE REPORT

A 5-year-old boy presented with right inguinal swelling since infancy. It decreased in size on lying but did not disappear completely. The left hemiscrotum was empty and no testis was palpable in left inguinal canal. The right testis was palpable in right scrotum. His blood complete picture and urine analysis were normal. Right inguinal hernia was diagnosed and herniotomy was planned.

During exploration of the right spermatic cord, both testes were unexpectedly delivered in the wound. Each testis had its own spermatic cord, which were fused proximally at deep inguinal ring for few centimeters. Both testes had separate vasa deferentia and vascular pedicles. Both testes were almost equal and normal in size (Figure 1). After right herniotomy, both testes were fixed in their respective hemiscrotum. Left testis was placed in the left hemiscrotum through transcepal

window and was fixed in subdartos pouch. Post-operatively, pelvic ultrasonography and MRI of the pelvis and abdomen were done to rule out Mullerian duct remnants and other anomalies. MRI showed no pelvic or renal anomaly (Figure 2). Regular follow-up of the patient was advised.

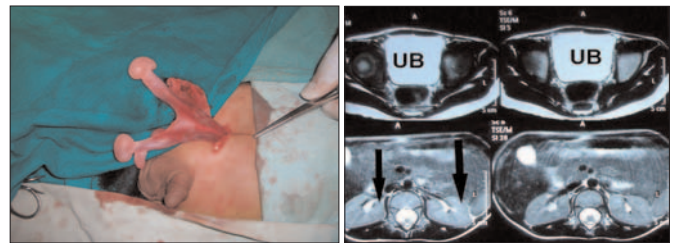


Figure 1: Microscopic picture of meningioma brain.

Figure 2: Microscopic picture of metastatic meningioma liver.

DISCUSSION

Transverse testicular ectopia is also known as crossed testicular ectopia, testicular pseudo-duplication, unilateral double testes and transverse aberrant testicular maldescent. It is the migration of the testis to the opposite side where both testes pass through the same inguinal canal. Lenhossek described this entity first time in 1886.² The first case report published in English literature was by Halstead in 1907.³ More than hundred cases have been reported so far.

Transverse testicular ectopia has been classified into three types depending on the presence of different associated anomalies; 1: associated with inguinal hernia alone (40- 50%), 2: associated with persistent Mullerian duct syndrome (30%) and 3: associated with other anomalies without Mullerian duct remnants (inguinal hernia, hypospadias, pseudohermaphroditism and scrotal abnormalities, 20%).

Exact etiology of transverse testicular ectopia is unknown, different theories have been proposed to explain the etiology of ectopic testis; Lockwood described multiple insertion suggesting that the gubernaculum testis terminates in 5 tails that are

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Received January 25, 2008; accepted February 12, 2009.

attached to the bottom of the scrotum, the front of the pubis, the perineum, triangle in the thigh and the region of the inguinal ligament medial to the anterior superior iliac spine.⁴ Gupta and Das postulated that adherence and fusion of the developing Wolffian ducts occur early descent of one testis causes the other testis to follow it.⁵ According to Gray and Skandalabis, crossing over occur later, as in most cases, both ducts are separate.⁶

The mean age at presentation is 4 years. In most of the cases the correct diagnosis was not made pre-operatively and the condition was diagnosed during herniotomy. The common presentation was symptomatic inguinal hernia on the site to which ectopic testis has migrated. MRI and MR venography have been suggested for pre-operative location of impalpable testis.² Adams Baum *et al.* proposed pelvic inguinal canal ultrasonography in case of bilateral cryptorchidism and in patients with inguinal hernia of unusually hard consistency.⁸ Laparoscopy is useful for diagnosis and management of TTE and the associated anomalies.⁹

Treatment includes transcepal orchidopexy or extra-peritoneal transposition of the testis. A number of procedures have been described, including a staged procedure to bring the ectopic testis into its correct canal. When the transverse ectopic testis lies in the inguinal canal or at the external ring, after herniotomy, it should be brought into respective hemiscrotum through transcepal window along with its supplying structures. Search should be made for mullerian remnants and other anomalies. Postoperative long-term follow-up should be required as infertility and progression to

malignancy are relatively high with transverse testicular ectopia.¹⁰

In the present case, the ectopic testis was located at superficial inguinal ring after right herniotomy; the left testis was brought to left scrotum through transcepal window and anchored in the subdartos muscle pouch.

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