Crossed Testicular Ectopia: Suprapubic Approach

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Abstract:
A child with a left non-palpable testis underwent surgery for an incarcerated right inguinal hernia. During the operation a left crossed ectopic testis was found at the internal ring and was brought down into the left hemiscrotum through a suprapubic tunnel. The literature is reviewed and this approach of orchidopexy of crossed testis is discussed.

Introduction:
Crossed testicular ectopia, a rare anomaly, is a deviation of testicular descent resulting in unilateral location of both testes, and is usually associated with an inguinal hernia. The diagnosis is made mostly during an operation for an inguinal hernia with an empty contralateral scrotum. The ectopic testis is commonly brought down through the same internal ring and fixed in the respective hemiscrotum through a transseptal window. In this case, the left crossed testis was brought down into the left hemiscrotum through a suprapubic tunnel.

The Case:
A five-month-old child with a left non-palpable testis presented with a tender irreducible swelling in the right groin. The right testis was palpable in the scrotum. Exploration of the right groin revealed two testes, one in the scrotum and another at the internal ring. Each testis had a separate vas deferens and vessels but both spermatic cords were connected proximally by a thick bridge of tissue. On exploration of the left groin, the left testis was not found and a diagnosis of crossed ectopia was confirmed. A suprapubic tunnel was made, through which the left crossed testis was brought and fixed in the left hemiscrotum. Right inguinal herniotomy and right orchidopexy were performed. Magnetic resonance imaging of the pelvis did not show any Mullerian duct anomalies. Karyotyping and hormonal studies were normal.

Discussion:
Crossed testicular ectopia was first reported by Von Lenhossek in 1886. Since that time more than a hundred cases have been described as true crossed ectopia. It is postulated that this anomaly results from disruption of the attachment of the testis to the gubernaculum. True crossed ectopia is characterized by two testes found on one side with no testis on the other side; each testis has its own epididymis, ductus deferens and testicular vessels; the vascular supply and the ductus deferens of the crossed testis is derived from the appropriate side; and there is a patent processus vaginalis on the side of the testes with no hernia on the contralateral side. Persistent Mullerian remnants and other genito-urinary anomalies are rarely associated with this anomaly. In most reported cases the correct diagnosis was made only intra-operatively during surgery for incarcerated hernia. Nam YS et al reported a case of transverse testicular ectopia diagnosed preoperatively by ultrasonography in a patient with a right-side inguinal hernia and left-side cryptorchism. Magnetic Resonant Imaging and laparoscopy are used to confirm the diagnosis and to rule out persistent Mullerian remnants.
The method of pushing the crossed testis back into the abdomen and bringing it down into the respective internal ring requires laparotomy and carries the risk of injury to cord contents during separation. The transseptal orchidopexy which is commonly performed is beneficial in cases of ductal fusion where bringing both testes on the same side avoids damage during separation of the fused cords. However, this approach might leave bulky tissue in one side of the scrotum and groin leading to disfigurement and, more importantly, it might lead to damage of both cords in cases of future infection or exploration. In our case the deep fascia of the abdominal wall was tunneled from the right groin wound passing through the suprapubic region and down to the left external ring. Then the crossed testis was brought down through the suprapubic tunnel and placed into the appropriate hemiscrotum without dissecting the cords. This approach avoided the risk of transseptal fixation since both cords were distally separated. To our knowledge no similar approach has been described in the English literature.

Conclusion:

Crossed ectopic testis is a rare anomaly of testicular descent that is usually fixed through a transseptal window. We report a case of crossed left ectopic testis brought down to the correct hemiscrotum through a suprapubic approach.

References: