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**Letter to the Edior**

# Diagnosis and Treatment of Crossed Testicular Ectopia

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## Dear Editor-in-Chief

Crossed Testicular Ectopia (CTE), an extremely rare congenital anomaly, was first described by Lenhossek, the finding of an ectopic testis in an autopsy performed by his father (1). It is a deviation of testicular descent resulting in unilateral location of both testes (2). CTE poses a problem of diagnosis and treatment. The ethology of crossed testicular ectopic remains undefined but has been speculated to result from abnormal inguinoscrotal descent of ectopic testes (3).

Between Jan 2005 and Dec 2013, 11 boys were treated for CTE in the department of Pediatric Surgery in Hedi Chaker Hospital in Sfax. Patient demographics, clinical data, operating techniques and intraoperative findings were collected and analyzed. The age of the patients ranged from 10 to 15 mo (average 11.7 mo). Diagnosis of CTE had been made in 7 cases of the eleven 64% in intraoperative (Fig. 1): Two cases in strangulated inguinal hernia 18%, four cases had bilateral undescended testes which are not palpable 36% and five boys had inguinal hernia with contralateral undescended testicle 45%. For the four patients who had bilateral undescended testes that are not palpable, ultrasound exploration was made in preoperative confirming the diagnosis of CTE. The age of operation was between 12 and 18 mo. A trans-septal orchiopexy was performed via the inguinal incision after determination of adequate length of the spermatic cord in all patients (Fig. 2). A persistent Mullerian duct syndrome was objectified in 6 cases 54.5%: 3 patients from how had bilateral undescended testes which are not palpable and 3 patients from how had inguinal hernia with contralateral undescended testicle. The mean follow-up was 2.6 yr (range 2-10 yr), 3 patients 27% presents a contralateral testicular atrophy.

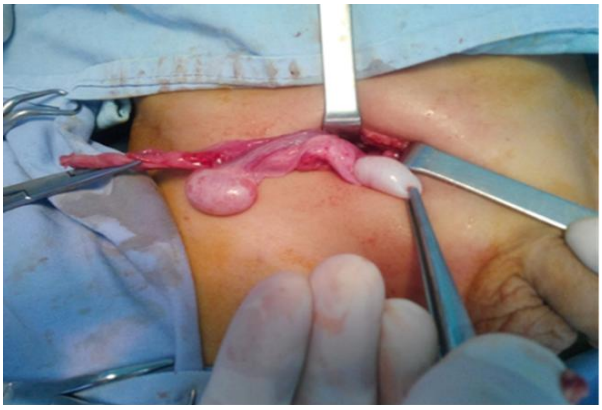

**Fig. 1:** Intraoperative view showing both testes on the right side

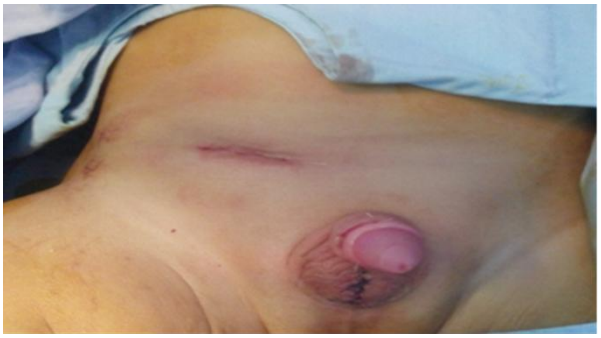

**Fig. 2:** Transseptal orchiopexy

Several embryological theories explaining the origins of CTE have been reported. There is a direct relationship between testicular ectopic and the development of the gubernacula. Discovery of crossed testicular ectopic is often intraoperative during herniorrhaphy with inguinal hernia. The typical clinical scenario is an inguinal hernia with contralateral undescended testicle (4). In our series' most of the patients are still detected incidentally during exploration for inguinal hernia.

CTE is commonly associated with abnormalities of genitourinary development, most commonly inguinal hernia but also defective müllerian regression, hypospadias, seminal vesicle cyst, bilateral renal dysgenesis and pyelo ureteral junction obstruction (4). A study (4) has described a classification system for CTEbased on the presence of associated abnormalities: type 1 (40%-50%) associated with inguinal hernia alone, type 2 (30%) associated with persistent or rudimentary müllerian duct structures and type 3 (20%) associated with other genitourinary abnormalities without müllerian remnants. According to this classification, we had 4 patients who are type-I patients and 6 patients who are type-II patients.

The treatment of CTE is focused on the detection of associated congenital abnormalities and placement of ectopic testicles into anatomical positions. Transseptal orchiopexy, in which the ectopic testis is brought through the opposite inguinal canal and fixed in the correct hemiscrotum through the scrotal septum, is the treatment of choice if adequate length of spermatic cord is present. Orchiectomy should be reserved for cases where ectopic testes cannot be mobilized to a palpable position given the future risk of malignancy (5).

## Acknowledgement

The authors declare that there is no conflict of interests.

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