Case Report

TRANSVERSE TESTICULAR ECTOPIA: ACASE REPORT

Mohanad AL Naser.MD**, Mohammad FaisalMousa**.MD, **Ali Zrigat,MD**, **Abdelhakim Ni'mate**.MD, **Monther Omoosh**.MD , **Ashraf Al-Majali**, MD ,**Mohammed Qudah**.MD, **Belal Alkhwaldah, MD.**

Department of urology, Royal Medical Services, Jordan
gaithgsous@hotmail.com

Abstract

Transverse testicular ectopia (TTE) / crossed testicular ectopia (CTE) is a quite rare congenital anomaly, resulting from abnormally deviated descent of testis, leading to the presence of both testicles in a single scrotal compartment. It can coincide with other congenital anomalies, such as :(1) persistent mullerian duct system, (2) true and pseudohermaphroditism, (3) hypospadius, (4) inguinal hernia, and (5) scrotal wall abnormalities. Around 150 cases have been reported in literature; we report a case of a 29 year old male patient, with unknown previous medical illnesses, presented to the urology outpatient clinic complaining of painless left testicular mass, he underwent left inguinal exploration for radical orchidectomyand was found to have double unilateral spermatic cords and testicles.

Keywords:crossed testicular ectopia, testicular mass, double unilateral spermatic cords and testicles.

Introduction

Crossed testicular ectopia (CTE) is also known as double unilateral testicles or testicular psudoduplication, the sonographic incidence is reported as 1 case / 4 x $10^{6,}$ there is no difference in incidence to which side both testicles descend, and most cases are identified at a mean age of 9.3 years[1,2].

Case presentation

Our patient was 29 year old male patient, medically free, presented to our outpatient clinic in Prince Hussein urology and organ transplantation center (PHUO) in Jordan on jan-2017, with a chief complaint of: painless left scrotal swelling of 1 month duration, upon physical examination, his vital signs were:temp:36.8c orally,Bp:110/60 mmHg,HR:82 bpm,R.R:16. chest and abdominal examination were unremarkable, and on scrotal examination he has been found to have empty scrotum on right hemiscrotum, a normal testis located superomedially in left hemiscrotum, and another one palpated inferolaterally in left hemiscrotum with a 7x7 cm hard, non tender testicular mass.(Figure 1:A). Palpation at the neck of left scrotum revealed that both cords are palpable at the left side.

His complete blood count, kidney function test,liver function test, and tumor marker (AFP.HCG,LDH) were within normal limit; patient underwent imaging studies, and on scrotal u/s,he was found to have 6x3 cm heterogeneous left testicular mass with calcification, normal appearing right testis, normal both epidydmises, and normal bilateral inguinal lymph nodes .CT scan of the chest, abdomen and pelvis was

unremarkable except for bilateral multiple large lung masses, largest about 4x3.5 cm representing lung metastasis, in addition to multiple mediastinal lymph nodes enlargement ,the largest about 3 cm.so based on the physical examination and imaging study's findings, the patient was admitted to the male surgical ward, and has been prepared for radical orchiectomy on the following day. Upon dissection within the left inguinal canal, two spermatic cords has been identified originating from the internal ring (Figure 1:B), dissection down to the scrotum revealed both testicles to be adhered to each other, and being located in the left hemiscrotum, each with its own separate cord.the left testicle mass was dissected from right testicle and scrotal wall. The left testicle was fixed in a sub-datros pouch. The histopathology report showed unifocal left testicular tumor, measuring 7 cm in maximum dimension, invading the left spermatic cord, with lymphovascular invasion, with a final diagnosis Embryonal carcinoma PT3N3,so we have sent the patient to our oncology team for further management.

Discussion

Pathogenesis of CTE is controversial, different theories have been established, some believe that an anomalous or abscent gnbernaculum is crucial for CTE development, but still normal testicular descent is seen in cases of abscent or anomalous gnbernaculum[3].

Many believe that each testis form normally on different sides, then during descent, one will cross towards other side somehow. Factors allowing for such crossage include :(1) internal ring obstruction, (2) lack of peritoneum vaginalis process, and (3) abscent gnbernaculum.[4]

A classification system for CTE was established by Thevathasan, and includes the following types:

(1) Type I: simple CTE only associated with inguinal hernia.
(2) Type II: CTE with persistent mullerian duct remnants.
(3) Type III: CTE with other anomalies.[4,5]

It is essential to noticed that (as in our study), CTE can be associated with testicular tumor and malignancies such as; Embryonal cancer (EC), seminaoma, yolk sac, and teratoma, but cannot be classified as type III CTE, since the associated tumors are developmental rather than anomalous.[6,7,8]

In most cases, diagnosis is done intraoperatively, with most surgery being done for associated hernias.[9], preoperative diagnosis is still feasible with ultrasonography, but it is operator dependent, and needs good expertise. [10]

Conclusion

CTE is a quite rare anomaly, causes are yet to be identified, most cases are diagnosed intraoperatively, with majority being operated upon for hernioplasty, relation between CTE and testicular malignancy (as seen in our case) is yet to be reported.

References

1. Johnston JH.(1998) The testicles and the scrotum,in Williams DI,editor(ed).pediatric urology.Newyork,appelton-century-crofts,1968,pp 450-474.
2. Halstead AE, ectopia testis transversa.surg gynecol obstet.1907; 4; 129-132.
3. Palmar JM.The undescended testicles.Endocrinol metab clin north Am, 1991; 20(1); 231-40.
4. Gauderer MW, Grisoni ER, Stellato TA,Ponsky JL,Izant RJ Jr.transverse

testicular ectopia.J pediatr surg.1982;17(1):42-7.
5. Barolia DK, Scrhi D ET al.Triple testes-a rare case.int J Health Sci Res.2015; 5 (11):403-405.
6. Berkmen F.persistent Mullerian duct syndrome with or without transverse testicular ectopia and testis tumours.Br J Urol.1997; 79(1):122-126.
7. Melman A,Letter E,Perez JM,Driscoll D,Palmer C.The influence of neonatal orchiopexy upon the testis in persistent mullerian duct syndrome.J Urol.1981;125(6):856-858.
8. Eastham JA,McEvoy K,SullivanR,Chandrasoma P,A case of simultaneous bilateral nonsemoniomaatous testicular tumors in persistent mullerian duct syndrome.J urol.1992;(2 pt 1): 407-408.
9. Acikalin MF, Pasaoglu O, Tokar B, Ilgici D, Ilhan H.persistent mullerian duct syndrome with transverse testicular ectopia case report with literature review. Turk J Med Sct.2004; 34:333-336.
10. Nam YS,Baik HK,Kim SJ,Lee HK,Park HK,Transverse ectopia found by preoperative ultrasonography Korean Med Scr.1998;13 (3): 328-330.

Figure 1: A preoperative scrotal examination showed left testicular swelling and empty right scrotum.

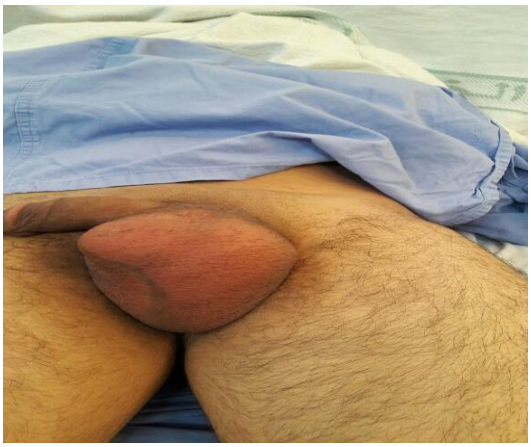

Figure 1: B intraoperatively, two cords and two testicles are shown in the left side after dissection of the left inguinal canal.