

Medi Quest BRS Hospital

A monthly News letter from BRS Hospital

TORSION OF THE TESTIS

Dr.N.Mohan MS.,FICS., FAIS.,

Professor and Head of Dept of Surgery, G.R.H/K.M.C(Rtd)
Emeritus Prof of Surgery TN Dr.M.G.R. Medical University
Senior Surgeon – Consultant **BRS Hospital**

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Editors

Dr.B.Madhusudhan,
MS.MCh.,DNB(Plastic)

Dr.S.Ramesh,MD,DCh

28,Cathedral garden Rd,
Nungambakkam,
Chennai - 600 034.

Phone:

044 - 30414250

044 - 30414230

Email:

brsmadhu@yahoo.co.in

Web:

www.brshospital.com

Torsion of the testis is an acute scrotal condition that can result in significant morbidity, testicular loss and infertility. It can create confusion in the diagnosis and any delay in scrotal exploration adds to the morbidity. Thus torsion of the testis needs immediate attention.

We shall see the experience in two such cases; unfortunately both the patients came late.

CASE 1.

A fifteen year old boy was brought to the hospital with the history of pain in the scrotum for five days and was being treated elsewhere as epididymo orchitis that did not respond to the therapy ; hence the second opinion. On examination the boy was absolutely comfortable and afebrile .The right side of the scrotum was appearing red and swollen. It was tender. The left side was normal.

He was taken up for scrotal exploration immediately under general anaesthesia. A right sided scrotal incision was made and the testis was exposed.

It was jet black, an evidence of gangrene due to the loss of vascularity; we had to do orchectomy on the right side. Through a left side incision the testis was exposed. There was a mesorchium separating the epididymis from the testis. Orchiopexy was performed. The boy had an uneventful post operative period and recovered.



HORIZONTAL LIE OF THE RIGHT TESTIS

CASE 2.

A 21 year old adolescent employed in a private company came with a complaint of pain in the scrotum on the left side of three days and was also treated outside where an ultrasonographic study and Doppler evaluation was made of the scrotal contents. The study revealed absence of blood flow to the left testis indicating non viable testis. The patient was clinically otherwise stable. On examination the scrotum was swollen and oedematous.

He was taken up for exploration under spinal anaesthesia .Exposing the testis revealed a black testis confirming gangrene; hence orchectomy was carried out. The right testis was exposed by a separate incision and there was a mesorchium separating the testis and the epididymis. Orchiopexy was performed. The patient made an uneventful recovery.

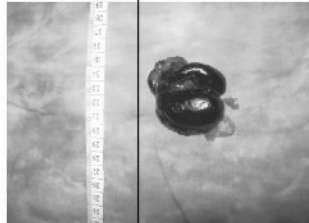
DISCUSSION

Two cases of testicular torsion are reported. As can be observed this condition can occur in any age group between 5 and 25. Of course no age is exempt. This condition occurs in abnormal testis since a normally developed testis is well anchored. The abnormalities that make the testis prone for torsion are:

1. **Inversion of the testis** where the testis is rotated either horizontally or upside down.
2. **High Investment of the Tunica Vaginalis** "Clapper bell deformity"
3. **Presence of Mesorchium** here the testis undergoes torsion without involving the cord.
4. **Incompletely Descended Testis**



GANGRENOUS RIGHT TESTIS



RESECTED SPECIMEN



MESORCHIUM CONNECTING THE TESTIS AND EPIDIDYMIS SHOWN BY THE ARTERY FORCEPS

CLINICAL FEATURES:

Torsion occurs spontaneously or following straining at stool lifting heavy weight or coitus. Patient experiences dull ache or agonizing pain in the groin or lower abdomen. It may be associated with vomiting. Swelling of the scrotum appears along with redness. This situation simulates epididymorchitis from which torsion cannot be differentiated easily. Elevation of the scrotum relieves pain in epididymo orchitis, but not in torsion (PREHN'S sign). The testis is in transverse lie and at a higher level on the affected side and the cremasteric reflex is absent on the affected side also. There is associated leucocytosis and urethritis in epididymo orchitis.

The incompletely descended testis if undergoes torsion can be recognized by the oedematous yet EMPTY scrotum.

When the situation is equivocal it is advised to do nuclear scintigraphy and colour Doppler ultrasound for evaluating testicular torsion. A word of caution: time should not be lost by waiting for the imaging studies.

DIFERENTIAL DIAGNOSIS

• Torsion of testicular or epididymal appendage

- This usually occurs in boys aged between 7 and 12 years.
- Systemic symptoms are rare.
- There is usually localised tenderness but only in the upper pole of the testis.
- Occasionally, the "blue dot sign" is present in light-skinned boys (i.e., tender nodule with blue discoloration on the upper pole of the testis).³

• Epididymitis, orchitis, epididymo-orchitis

- These conditions most commonly occur from the reflux of infected urine or from sexually acquired disease caused by *Gonococci spp.* and *Chlamydia spp.*
- Hence they tend to affect an older age group.

• Hydrocele

- Swelling is usually painless.
- The scrotum will transilluminate.

• Incarcerated hernia

- This may be diagnosed by careful examination of the inguinal canal.



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• Testicular tumour

- Scrotal enlargement occurs more slowly
- It is only rarely accompanied by pain. Typically the normal slightly delicate sensation of the testis is absent.

• Mumps

- There is swelling of the parotid glands in mumps
- Mumps orchitis is rare before puberty.

INVESTIGATION

The most important investigation is ultrasound integrated with colour Doppler. A very significant finding is the detection of presence/absence of intra-testicular blood flow for the early identification of testicular torsion.

Ultrasound will show absence of arterial flow. A hand-held Doppler has been used to good effect. Other useful modalities include dynamic contrast magnetic resonance imaging and near-infrared imaging.

A survey of urologists in the North-west of England found that 4 of 29 always like to use imaging. Most use it only if the clinical diagnosis is unclear.

It is imperative to remember that this is a condition in which time is of the essence and waiting a couple of hours for a slot in the ultrasound department may compromise the viability of the testis.

MANAGEMENT

- It may be possible to reduce the torsion manually. The testes usually rotate in different directions. The left testis rotates anticlockwise and the right testis clockwise in torsion. Hence they need to be rotated in the opposite direction. If this relieves the pain it is the correct direction. If it aggravates, it try the other direction.
- If this is done it should be verified by colour doppler. If the manoeuvre is successful, orchidopexy must still be performed. This should be done in the immediate future, preferably before the patient leaves hospital.
- If full manual reduction of torsion cannot be performed or if there is doubt about the diagnosis and reason to suspect torsion, the scrotum must be explored.

- The testis must be unwound at operation and inspected for viability. If it is not viable, it should be removed.
- If the testis is viable then orchidopexy should be performed to prevent recurrence.
- Whether the affected testis is removed or conserved, the contralateral one should undergo orchidopexy as the risk of recurrence on the other side is otherwise high.

TREATMENT:

Time should not be lost for the exploration of the scrotum because with time passing by, the viability of the testis is in danger. Mechanical reduction by manual untwisting may be attempted in the emergency room provided the patient is seen within four hours of the onset of the symptoms.

The BEST treatment is EXPLORATION OF THE SCROTUM because that is the way one can salvage the testis. Even if the manual untwisting is successful surgery is still indicated for orchidopexy ; otherwise torsion will recur. The nonviable testis must be removed. The other side must also be explored for orchidopexy since testicular abnormalities are usually

TORSION OF THE TESTICULAR APPENDAGES

The testicular appendages also can undergo torsion where the pain and other symptoms are not very exaggerated. The testicular appendage, the pedunculated hydatid of Morgagni, when affected and becomes ischaemic presents the BLUE DOT sign seen through the scrotal skin. It can be treated expectantly or can be removed surgically, the advantage being that the surgeon is sure he has not missed a testicular torsion.

Thus testicular torsion is a tricky situation indeed!



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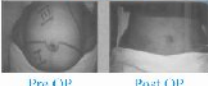
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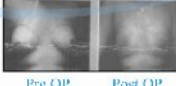
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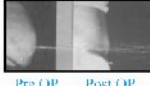
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