We report the case of a three year old boy with torsion of undescended testis, within the inguinal canal, which is a very rare entity. The pathophysiology and the management is discussed in detail.

Key words: Torsion, undescended testis, inguinal canal.

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Torsion within the inguinal canal is very rare, despite the fact that 75% of the cryptorchid testis are located there. It is usually present in patients of spastic neuromuscular disease. Torsion within the inguinal canal in an otherwise healthy young child has very rarely been reported. One such case is hereby reported for world literature.

CASE REPORT

A three-year-old child presented to the accident and emergency department of our hospital, with a history of three days of severe pain in the right groin, which was sudden in onset without any precipitating factor and associated with episodes of vomiting and fever. On examination the patient was febrile (temp-37.6°C), with a pulse rate of 120/min. The rest of the general physical examination was unremarkable. Systemic examination revealed an extra-abdominal tender lump of 3 x 3 cm in the right groin, with poorly developed right hemiscrotum and absence of right testis on that side. Left hemiscrotum was normal with normally placed testis.

CBC revealed leucocytosis with neutrophilia. Urine examination was normal. A clinical impression of torsion of right maldescended testis was made and the patient was subjected to emergency surgical exploration. At exploration, a swollen gangrenous right testicle with congested pampiniform plexus was found, with 360° twist of the spermatic cord in the inguinal canal [Figures 1]. There was no associated hernial sac. Right-sided orchidectomy was done. Post operatively, the patient made an uneventful recovery. Histology of the specimen confirmed a gangrenous right testicle.

DISCUSSION

Although torsion of an undescended testis is rare, it should be considered in any child who presents with history of groin pain and empty ipsilateral hemiscrotum. The peak incidence of torsion has been reported around puberty and in the first year of life.
but no age is exempted, as was seen in our patient who was three years old. Various factors have been reported to precipitate torsion,\textsuperscript{[2,3]} but interestingly, none was found in our patient. Our patient had a normal lie of the opposite testis. Therefore normal lie of the opposite testis should not rule out torsion. Long duration and the severity of torsion were the factors leading to the loss of testis in our patient. A duration of $>$ 24 hours and a rotation of 360 degrees has been reported to be certainly associated with gangrene of testis, although severe damage has been reported after as little as 4 hrs of torsion.\textsuperscript{[6]} We did not undertake any investigation in our patient, as the diagnosis was clear and exploration was mandatory. In fact, imaging is a fruitless and an expensive endeavour and in most situations, does not influence the decision to operate.\textsuperscript{[7]}

The abnormal insertion of tunica vaginalis associated with a bell clapper deformity, predisposes to intravaginal torsion and accounts for 90\% of the cases. The same type of torsion was present in our patient. Our patient had torsion of testis in the inguinal canal, which is a rarity.\textsuperscript{[6]} This is probably due to the significant hernia and relatively short cord seen in the inguinal testis, compared to ectopic testis, thus making torsion more difficult.\textsuperscript{[1]}

Controversy still exists about fixation of the contralateral testis to prevent its loss. The abnormal insertion of the tunica vaginalis in association with bell clapper deformity of the testis, which is usually bilateral, had led to the philosophy that fixation of the opposite testis following intravaginal torsion is mandatory. We did not fix the opposite testis, which was found to be normally placed. The risk of losing the second testis has been reported to be small.\textsuperscript{[6]} Still, many surgeons find it mandatory to fix the contralateral testis routinely after an orchidectomy, for torsion, for whatever reason. However, follow-up examinations by Woitek \textit{et al}.\textsuperscript{[9]} following testicular torsion, did not reveal any differences in the development of contralateral testicles which were preventively fixed, compared with those which were not. It is thus concluded, that criteria other than testicular development must be taken into account, when deciding on mandatory contralateral orchiopexy in testicular torsion.

\textbf{REFERENCES}