

Scrotoschisis: A rare cause of acute scrotum in neonates

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ABSTRACT

Spontaneous extrusion of the testis from the scrotum is a very rare cause of acute scrotum in neonates. It has been described as scrotoschisis in few case reports. The exact etiology of this condition is not known. Replacing the testes and repair of scrotum is needed and associated with good prognosis. We report two cases that presented in a short interval to us with a review of the literature.

Key words: Neonate, testicular extrusion, scrotum

INTRODUCTION

Testicular extrusion through the scrotal wall is called scrotoschisis. It is a rare entity and only a few cases have been reported.^[1-4] The cause of development of this condition is not known. It usually affects healthy newborns and we report this entity occurring in two neonates.

CASE REPORTS

Case 1

A 15-day-old male baby was brought from an orphanage with his right testes extruding from the scrotum. The birth details were not available. There was no history of trauma. Care givers at the orphanage noticed sudden extrusion of the right testes from the scrotal defect without any redness or swelling prior to this event. The baby had a transverse wound at the base of the scrotum with his testis prolapsing through it [Figure 1]. There was no bleeding and the testis appeared edematous and firm in consistency,

suggestive of orchitis. The left testis was normal in position and size. No other genitourinary abnormalities were seen.

Case 2

A newborn baby was noticed to have transverse breech at the base of the left scrotal wall with protrusion of the testis. The baby was active with no other abnormalities. The baby was born by the normal vaginal route and full-term gestation. There was no history of any birth injury or injury to the scrotum after birth. Antenatal ultrasound showed no abnormality. On examination, the left testes was seen to be protruding from the scrotum, normal in size and appeared viable [Figure 2]. The right testes were normal in size and position. No other genitourinary abnormalities were seen.

Both neonates underwent routine hematological investigations and ultrasound of the abdomen which were normal. Repositioning of the testis and repair of the scrotum was performed with biopsy of the edges. The post-operative period was uneventful in both babies with excellent healing of the wounds. [Figures 1, 2]. Edge biopsy of the skin showed early inflammatory signs with no features of presence of meconium or aplasia cutis. Both babies were followed at regular intervals and recent follow-up at 1 year showed good healing of the wounds with normal-sized testis in the scrotum.

DISCUSSION

Scrotoschisis, the extrusion of the testis through the scrotal wall in neonates, is very rare. Most cases of the scrotoschisis are unilateral and affect normal males. Bilateral scrotoschisis has also been reported. In scrotoschisis, the testicular descent is in the normal pathway but extrusion occurs due to a defect in the scrotal skin wall, the cause of which is not fully understood yet. The immediate prognosis is good and the long-term results are not available.

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Access this article online	
Quick Response Code: 	Website: www.indianjurol.com
	DOI: 10.4103/0970-1591.156923



Figure 1: Case 1

Many theories have been proposed for the development of this condition, but none is proved. The occurrence of meconial periorchitis is the best theory available.

The proposed pathophysiology is the late rupture of the scrotal skin secondary to an inflammatory reaction caused by exposure to meconium extruded from an intestinal segment and delivered to the scrotum during fetal life through the patent processus-vaginalis,^[5] but other reports have failed to demonstrate evidence of meconium peritonitis like in our cases. The site of defect described in meconium-associated evisceration is anteromedial in the scrotum, but in both the cases the defect was at the base of the scrotum suggesting other etiology for its development.

External mechanical compression due to arthrogryposis is also suggested as a cause of scrotoschisis by Lais *et al.*, as approximating feet will squeeze the scrotum causing scrotoschisis. Obstetric trauma proposed as cause is less likely as the testes and scrotum being mobile structures will escape from injury.^[3] Shukla *et al.* called it as extracorporeal ectopic occurring due to scrotal defect during descent of the testes. Gongaware *et al.*^[4] suggested the failure of differentiation of scrotal mesenchyme leaving a defect where gubernaculum was covered only by a thin layer of epithelium causing rupture or avascular necrosis of the scrotum due to a lack of a sufficient supporting structure within it.

Early amnion rupture or the adhesion/band spectrum is often cited as a probable factor in scrotoschisis. Aberrant amnion bands, strands or sheets can cause disruption of morphogenesis in the abdominal wall.^[5] The different techniques described for scrotal fixation as in orchiopexy can be utilized. As the number is very small, no procedure is recommended over others. Jesus *et al.* reported Denis–Browne trans-scrotal orchiopexy (eversion of tunica



Figure 2: Case 2

vaginalis with fixation in subdartos pouch) is associated with good results.^[2]

The first neonate in our series was 15 days old and no abnormality of the scrotum was noted. However, the testis appeared bigger and firm in consistency, indicating orchitis. All these theories are not accepted and no uniform findings were described in all reports; hence, the cause still remains unclear.

In conclusion, scrotoschisis seems to affect otherwise healthy newborn males with no associated illness requiring repositioning of eviscerated testis with scrotal repair. The immediate prognosis is good, but long-term results need to be studied.

ACKNOWLEDGMENT

The authors thank the Medical Director and CEO K.L.E. Dr. Prabhakar Kore Hospital and MRC, Belgaum, Karnataka, India.

REFERENCES

1. Hadley GP, Wiersma R. Scrotoschisis. *Pediatr Surg Int* 1994;9:148-9.
2. Jesus LE, Dekermacher S, Filho JA, Rocha LJ. Scrotoschisis: An extremely rare congenital uropathy. *Urology* 2012;79:219-21.
3. Premkumar MH, Colen JS, Roth DR, Fernandes CJ. Could scrotoschisis mimic an iatrogenic injury? A case report. *Urology* 2009;73:795-6.
4. Gongaware RD, Sussman AM, Kraebber DM, Michigan S. Scrotoschisis as a mechanism for extracorporeal testicular ectopia. *J Pediatr Surg* 1991;26:1430-1.
5. Jesus LE, Dekermacher S, Filho JA, Rocha LJ. Scrotoschisis: An extremely rare congenital uropathy. *Urology* 2012;79:219-21.

How to cite this article: Pujar VC, Joshi SS, Singh DR. Scrotoschisis: A rare cause of acute scrotum in neonates. *Indian J Urol* 2015;31:262-3.

Source of Support: Nil, **Conflict of Interest:** None declared.