

## A Testicular Torsion and Contralateral Hydrocele in a Neonate

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### ABSTRACT

**Background:** A testicular torsion is an acute surgical emergency which needs a prompt work up. Neonatal testicular torsion is an uncommon event.

**Aim of the work:** This article aim to describe a case report of a neonate presented with testicular torsion and contralateral hydrocele.

**Results:** Clinical and radiological management were discussed.

**Conclusion:** The case demonstrated that the possibility of uncommon presentation of acute scrotum such as testicular torsion with contralateral hydrocele can occur.

**Keywords:** Testicular torsion, Neonate, Acute scrotum.

### INTRODUCTION

A testicular torsion is an acute surgical emergency and need a prompt work up. Neonatal testicular torsion is an uncommon event occurring at incidence of 6 per 100,000 live births <sup>[1]</sup>. In many cases of neonatal testicular torsion, a contralateral hydrocele may be appreciated. The incidence of hydroceles in term newborns with no other scrotal pathology has been reported to be between 1% and 5% <sup>[2]</sup>.

The study was done after approval of ethical board of Maternity & Children Hospital, Alahsa.

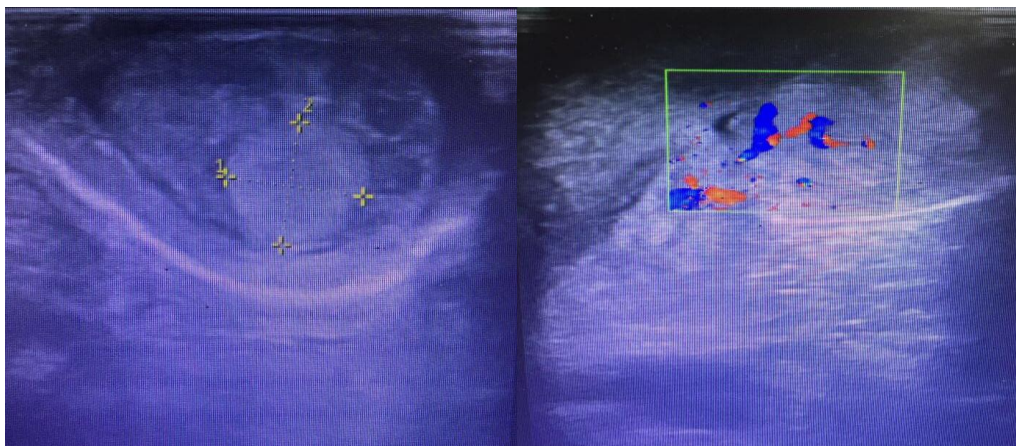
### CASE REPORT

An hour old full term baby via normal spontaneous vaginal delivery referred to us with history of bilateral scrotal swelling. The baby's mother was healthy with unremarkable antenatal history. On examination, patient was vitally stable with temperature of 37°C, heart rate of 146 beat per minute, blood pressure 63/32, respiratory

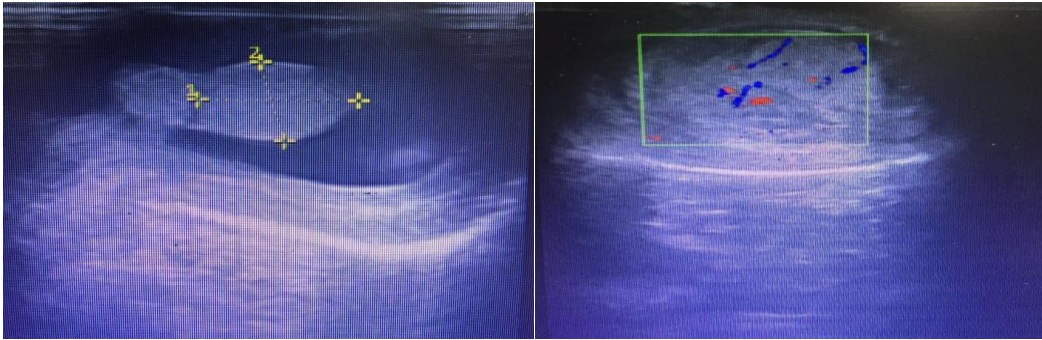
rate of 52 breath per minute and 100% oxygen saturation on room air. The baby was irritable and crying, not pale jaundiced or cyanosed. There was no apparent dysmorphic features or congenital anomalies. Local examination of the genitalia revealed normal looking external male genitalia with bilateral scrotal swelling, more on the left side.

Overlying skin color was normal. Left testicle was enlarged, hard and tender. Right testicle was mildly enlarged but not hard or tender. Laboratory investigation were within normal level.

Scrotal ultrasonography showed diffuse scrotal skin thickening donating scrotal edema. Left testis was enlarged as well as the epididymis with heterogeneous echogenicity, measuring 10 x 9 mm, and no clear internal vascularity which raised the possibility of testicular torsion. The right testis and epididymis were normal in size and echogenicity. Large right sided hydrocele was noticed.



**Figure (1):** US of the left testis



**Figure (2):** US of the right testis

According to the previous findings, the patient was taken to the operating room for emergency scrotal exploration. Mid-scrotal incision was done and exploration of the left hemi-scrotum revealed a total gangrenous non-viable left testis. Thus, left orchiectomy was done. Exploration of the right side showed small hydrocele. Evacuation of the hydrocele then a prophylactic orchiopexy of the right testis at two point was done. Post-operatively, the patient was kept on intravenous antibiotics for 24 hours. And then, discharged home in good general condition.

## DISCUSSION

Neonatal torsion accounts for approximately 12% of all cases of torsion throughout childhood and is considered almost always extravaginal in origin<sup>[1, 3]</sup>. Few intravaginal cases have also been reported in the literature<sup>[4]</sup>. The exact etiology of neonatal torsion has not been described; however, predisposing factors include difficult labor, breech presentation, high birth weight, a hyperactive cremasteric reflex, and multiparity<sup>[4, 5]</sup>.

Cases of neonatal torsion have been divided into a prenatal group, in which the torsion is detected at delivery, and a postnatal group, in which the torsion is detected later. About 70% of cases have been reported to occur prenatally with the rest occurring during the first month of life<sup>[4, 5, 6]</sup>.

In contrast to older patients with torsion who present with sudden excruciating pain, and gastrointestinal symptoms like nausea and vomiting, prenatal torsion is associated with minimal to no discomfort at birth<sup>[7, 8]</sup>. In postnatal torsion, there is an association with a swollen and tender scrotum. The newborn may appear otherwise healthy without any symptoms. Vital signs and blood work may also be non-revealing. A pathognomonic finding is a hard, non-tender testis fixed to the discolored scrotum. Other findings include a scrotal mass that does not transmit light<sup>[3, 5, 7]</sup>.

The diagnosis of testicular torsion can be made on clinical presentation alone. Doppler US is highly

sensitive, frequently revealing testicular heterogeneity, swelling, a hydrocele, skin thickening, and absent flow. However, these findings can be non-specific, particularly because identifying Doppler flow in normal neonates could be difficult. Some authors have proposed the role for US to be mainly visualization of scrotal contents to exclude other pertinent alternative diagnosis such as testicular neoplasm or hernia<sup>[4, 7, 9]</sup>.

## CONCLUSION

A neonatal testicular torsion and contralateral hydrocele is an uncommon event. However, pediatric surgeons and pediatric urologists should keep in mind that a testicular torsion in a neonate is one of the differential diagnoses of acute scrotum that need a prompt work up.

**Ethical consideration:** Approved by maternity and children hospital, Alahsa, Saudi Arabia.

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