



## PEDIATRIC UROLOGY CASE REPORTS

ISSN 2148-2969

<http://www.pediatricurologycasereports.com>

# Acute abdomen caused by torsion of an undescended testis: A rare presentation and its diagnostic dilemma

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## ABSTRACT

Most undescended testicles are asymptomatic and diagnosed in the first years of life. In some rare cases the diagnosis is established during childhood due to sudden torsion of the spermatic cord. Additionally, testicular torsion is a well-known urologic emergency that needs to be diagnosed and treated rapidly for the salvage of testis. We are here with reporting a case of torsion of an undescended testis with unusual clinical presentation, as acute abdomen, and its diagnostic dilemma and management.

**Key Words:** Cryptorchidism; torsion; undescended testis; acute abdomen.

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Accepted for publication: 30 June 2017*

presentations [1-5]. We are here with reporting a case of torsion of an undescended testis with unusual clinical presentation, as acute abdomen, and its diagnostic dilemma and management.

## Introduction

Undescended testis is one of the common conditions in children requiring surgical correction. Beyond the newborn period, testicular torsion is almost always associated with the bell-clapper variant. Common presentations of testicular torsion are pain, swelling and redness; which requires urgent intervention for salvaging the testis. Unusual presentations though uncommon, may lead to delay in intervention resulting in loss of testis. High index of suspicion is warranted for diagnosis and timely intervention of torsion in a baby presenting with non-urologic

## Case report

Three year old child was brought to us with abdominal distention and bilious vomiting of 4 days duration. Baby had not passed stools for 2 days and had decreased urine output since 2 days. His antenatal and perinatal period was uneventful. On admission, baby was listless, drowsy and had severe dehydration. His pulse rate was -156/min, BP-50/30mmhg, SpO<sub>2</sub>-90% on room air.

On examination he had distended abdomen with dilated bowel loops, had diffuse tenderness and absent bowel sounds. Genital

examination revealed empty right scrotum with a small lump in right groin, which was mildly tender with no inflammatory signs. Phallus was normal with left descended testis in the scrotum. His blood urea was 140/mg and serum creatinine of 2.2mg/dl without much electrolyte and blood gas abnormalities at admission. Patient was evaluated with supine abdominal roentgenogram, which showed dilated small bowel loops [Fig. 1].



**Fig. 1.** Supine abdominal x ray –showing dilated bowel loops.

Bedside ultrasound of abdomen with doppler study of the groin revealed dilated loops of bowel with testicular swelling without any vascularity or bowel loops around it. In view of hypovolemic shock with pre renal azotemia, baby was resuscitated initially before surgical intervention.

In view of suspected testicular torsion, right groin exploration was done, which revealed gangrenous testis [Fig. 2], hence right

orchidectomy was done with orchidopexy of the left testis. Patient slowly recovered and discharged.



**Fig. 2.** Intraoperative picture showing gangrenous testis.

### Discussion

Torsion of the testis was first described in 1840 by Delasiauve [2]. Testicular torsion (TT) is a known complication in patients with undescended testis (UDT) with its overall incidence of 25 to 60%, whereas in inguinal testis it occurs around 9 to 45%. However its exact incidence in intra-abdominal testicular torsion is not known [3]. Torsion of the testis is a surgical emergency because of the high incidence of gonadal necrosis [4]. Intratunical or intravaginal torsion occurs most commonly and is predisposed to by an abnormally high investment of the spermatic cord by the tunica vaginalis (bell clapper anomaly) which usually occurs in UDT and beyond newborn period [2]. Extra tunical or extra vaginal torsion is less

common and is confined to the perinatal period.

TT commonly presents with acute scrotum or swelling in groin region and requires urgent interventions [2,3].

Unusual presentations have been reported with torsion of intra-abdominal testis with incidence of 31%; as they might present like features of acute appendicitis or bowel obstruction; hence leading to diagnostic and management dilemma [5]. Radford et al [6] reported a case of inguinal undescended testis which presented as acute appendicitis and concluded that an intra-abdominal testis can lead to acute life-threatening complications and therefore should be considered in any patient with acute abdominal symptoms who has an “absent” testis. In the literature there are only a few case reports of isolated abdominal pain in patients with testicular torsion. Mellick reported a single case, whereas Rathous et al and Corbett et al [7-9] reported two cases each of testicular torsion presenting as acute abdomen. Anderson et al. reported that 22% of the patients in their series had abdominal pain, which often preceded and exceeded the scrotal pain [10].

In our patient, laboratory evaluation revealed pre renal azotemia, hence it was planned to correct it before planned surgery. Meanwhile in view of empty right scrotum with small swelling in the groin with a possibility of torted testis or obstructed groin hernia, bed side ultra sonography and colour Doppler study were done which revealed the torted testis without any vascularity. Hence major laparotomy was avoided. Salvage rates are estimated at 90% to 100% if de torsion occurs within 6 hours of onset of symptoms, but decline to 20% after 12 hours and 0% to 10% if delayed longer than 24 hours. The treatment of choice for suspected, acute, testicular torsion is immediate surgical

exploration, regardless of the location of the testis [4].

Torsion of canalicular testis presenting like acute small intestinal obstruction is rare and may mislead the diagnosis if history of undescended testis is not forthcoming or not looked for in general physical examination. This patient underscores the importance of detailed general physical examination in each patient so that subtle clinical pointers are not missed out.

Given that testicular torsion is a potentially reversible condition when diagnosed and treated early, emphasis should be placed on the prompt evaluation of children who present with acute scrotum or inguinal or abdominal pain.

### Conclusion

Acute small bowel obstruction is a rare presentation of torsion in a canalicular testis. Key for diagnosis is high index of suspicion and thorough clinical examination. The diagnosis of torsion of an undescended testis should be considered in every child presenting with groin swelling or abdominal pain with empty scrotum.

### Acknowledgements

The author(s) declare that they have no competing interest and financial support.

Authors would like thank all the pediatric surgical colleagues, pediatric anesthetists, OT staffs, IT department of IGICH, Bangalore, Karnataka, India

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