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Case Report

Surgery Section

Obstructed Inguinal Hernia with Maldescended Testis in an Infant: A Case Report

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ABSTRACT

An inguinal hernia is a common congenital condition that can affect babies in their first year of life. This condition occurs when a segment of the intestines, omentum, or reproductive organs enters the scrotum or labia via an incompletely closed processus vaginalis. The main components of a hernia are typically the intestines and the ovaries or testicles. Immediate surgery is necessary for patients displaying an immobile dilated bowel loop (a potential indicator of strangulation) or reduced blood flow to the testicles/ovaries. Here the authors present a case of a five-month-old male infant who presented with abdominal distension with painful swelling in the left groin, which was irreducible. The swelling was globular, smooth, firm, tender, and irreducible, with an elevated local temperature. The left testis could not be palpated in the left hemiscrotum. Ultrasound revealed an obstructed inguinal hernia in the left inguinoscrotal region, with aperistaltic intestinal loops, mild fluid collection, and an absent left testis. The patient was scheduled for urgent surgery. A 5 cm oblique incision was made; an 8×4 cm sac containing ileum was opened, and the viable bowel was reduced. The sac was then ligated and excised, and a herniotomy was performed. The left testis was found to be viable and repositioned into the scrotum, followed by orchidopexy. Inguinal hernia in an infant can rapidly progress to strangulation; hence, early recognition and prompt surgical management are crucial to prevent life-threatening complications and preserve gonadal viability.

Keywords: Congenital condition,Congested bowel loop,Paediatric emergency, Ultrasonography

CASE REPORT

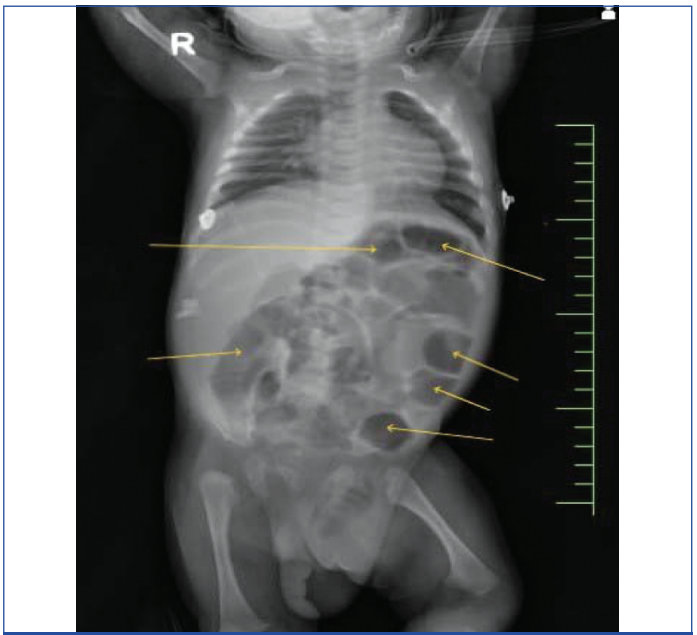
A five-month-old male infant was brought to the paediatric emergency unit with a history of a painful swelling in the left groin, noted over the past two months. The swelling had been intermittently reducible initially but had become persistently irreducible for the last two days, accompanied by abdominal distension.

On general assessment, the infant was stable, with mild pallor as the only abnormal finding. Examination of the left inguinoscrotal region demonstrated a well-defined swelling measuring approximately 8 × 4 cm, situated superior and medial to the left pubic tubercle. The mass was globular in shape, smooth in surface, firm on palpation, and tender, with a rise in local temperature. It was non-reducible and showed no increase in size during crying or straining.

The left hemiscrotum appeared poorly developed compared to the right side, and the left testis was not palpable within the scrotal sac [Table/Fig-1].

[Table/Fig-1]: Clinical photograph of the left inguinoscrotal region at presentation.

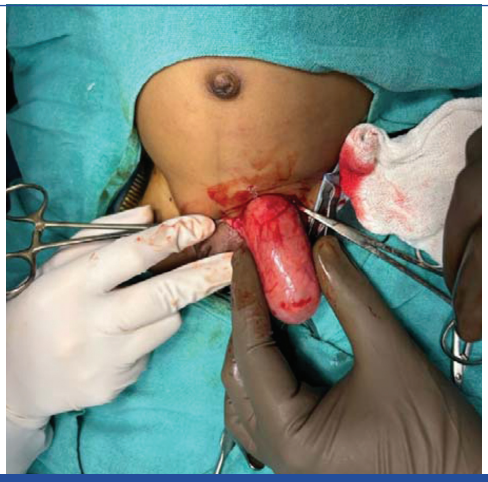
The swelling produced a resonant sound on percussion. Examination of the opposite inguinoscrotal area was normal. Auscultation over the swelling revealed sluggish bowel sounds. The abdominal exam showed distension, generalised pain, delayed bowel movements, and weak abdominal wall tone. Systemic and digital rectal exams were normal. Following a thorough physical examination, further investigations were conducted. An upright abdominal X-ray showed dilated bowel loops [Table/Fig-2].



[Table/Fig-2]: Upright abdominal radiograph (PA view) demonstrating multiple dilated bowel loops with air-fluid levels, consistent with intestinal obstruction secondary to an obstructed left inguinal hernia.

Ultrasound of the left inguinoscrotal region showed an obstructed inguinal hernia with non-peristaltic bowel loops, minimal fluid collection, and non-visualisation of the left testis. Based on these findings, a diagnosis of left-sided obstructed inguinal hernia was made.

The patient underwent emergency surgery. A 5 cm oblique incision was made in the left inguinoscrotal region. Intraoperatively, an approximately 8×4 cm hernial sac was identified [Table/Fig-3] and opened.



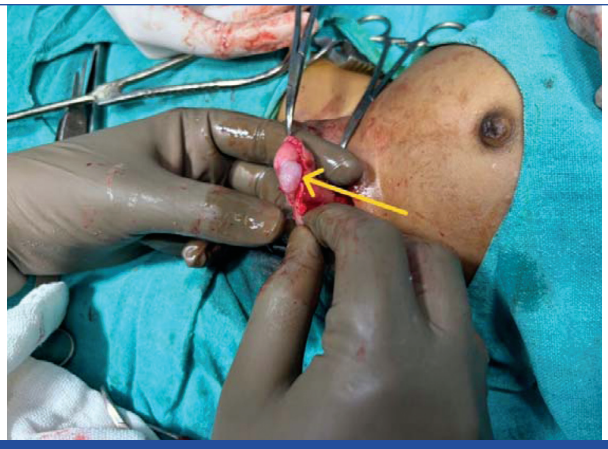
[Table/Fig-3]: Intraoperative photograph showing the hernia sac exposed through a left inguinoscrotal incision before opening.

The small bowel (ileum) was found to be the content [Table/Fig-4,5]. After confirming bowel viability and peristalsis, the congested bowel loop was reduced and returned to the peritoneal cavity. The sac was then ligated and excised, and a herniotomy was performed.

[Table/Fig-4]: Opened hernia sac containing congested ileal loops.

[Table/Fig-5]: Opened hernia sac containing congested ileal loops.

The left testis was found to be viable and repositioned into the scrotum, followed by orchidopexy [Table/Fig-6].



[Table/Fig-6]: Intraoperative photograph showing the viable left maldescended testis after reduction of hernia contents.

The postoperative course was uneventful. The patient passed flatus on day 3 and stool on day 5, and was discharged on day 8. At three-month follow-up, the infant was asymptomatic with a well-healed scar.

DISCUSSION

A hernia is defined as the protrusion of a viscus or part of a viscus through the wall that usually contains it [1]. Paediatric inguinal hernia is a common surgical problem, affecting about 1-5% of children worldwide, with a higher incidence of up to 30% in preterm neonates [2]. The ratio of male versus female incidence is 4-10:1, with the majority of full-term newborns presenting with right-sided inguinal hernia and the majority of preterm newborns with right-sided and bilateral inguinal hernia [2]. In females, persistence of the processus vaginalis results in the canal of Nuck hernia. The underlying aetiology is a patent processus vaginalis, which usually develops around the sixth month of gestation and closes by the eighth month. Failure of closure predisposes to herniation, and various organs may be involved, including bowel, omentum, ovary, or testis [3]. Ultrasound is a valuable adjunct to clinical examination for confirming hernia contents, assessing bowel or gonadal viability, and identifying coexisting undescended testis [4,5].

Surgical management remains the treatment of choice, with priority given to relieving obstruction and assessing the viability of involved structures. If the testis is viable and mobilisation is feasible, simultaneous orchidopexy is recommended [6,7]. In cases with doubtful vascularity, a staged orchidopexy may be more appropriate [8]. A rare but essential association is an inguinal hernia with an undescended or maldescended testis. While hernia with undescended testis (without obstruction) is reported in about 6-7% of cases [9], obstructed inguinal hernia with a maldescended testis is extremely rare. The presence of an indirect hernia sac almost invariably accompanies an undescended testis.These hernial sacs are typically asymptomatic and managed during surgery for undescended testis; presentation in adulthood is rare [10]. The current case is unique due to its very early presentation at five months of age, bowel obstruction as the hernia content, and successful preservation of a viable testis with simultaneous orchidopexy.

CONCLUSION(S)

The coexistence of an obstructed inguinal hernia with a maldescended testis in an infant is exceptionally rare. The present case highlights the importance of prompt recognition, urgent surgical intervention, and careful intraoperative assessment of both bowel and testis. Early hernia repair, combined with simultaneous orchidopexy when testicular viability permits, can achieve excellent outcomes and avoid the need for multiple surgeries. This case highlights that even in rare and complex presentations timely diagnosis and decisive surgical management can preserve organ function and facilitate a favourable recovery.

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