



Bilateral Obstructed Inguinal Hernia With Gangrene Of Both Testes In A Neonate

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II. INTRODUCTION

Inguinal hernia is one of the most common surgical condition in children. Children and infants are usually brought with complaints of inguinal swelling and the diagnosis is made easily. In rare situations, bystanders may not notice inguinal swelling and presentation may be with vague symptoms like vomiting, excessive crying, irritability, abdominal distension and refusal of feeds. Obstruction of inguinal hernia occurs due to delay in surgical correction. Patients with obstruction may fail to reach the surgeon in time because of various factors like unfavourable geographical location and delay in decision-making. The incidence of inguinal hernia in the pediatric age group ranges from 1 to 5% with the risk of obstruction being higher in children less than 1 year of age^{1, 2}. It has a higher male preponderance compared to females³. Reported complications of inguinal hernia include intestinal obstruction, intestinal necrosis, testicular atrophy, testicular gangrene, recurrence and, in female children, ovarian necrosis and ovarian atrophy^{2,4,5}.

Keywords: Obstructed hernia, neonatal inguinal hernia, testicular gangrene

III. CASE REPORT

A neonate, 30 days, late preterm (35 weeks), birth weight 2.3 kg, male baby, presented with complaints of persistent vomiting, excessive crying and irritability of 1 day duration. And the symptoms worsened, and the parents noticed swelling in the right scrotum 12 hours prior to admission. The neonate was referred to the Pediatric Surgery department for further management. On clinical examination, the abdomen was mildly distended with an irreducible right

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inguinal hernia and the right testis was swollen. Ultrasound showed a bulky and hyperechoic right testis with avascularity and fluid around the cord. The neonate was taken up for surgery; the bowel loops were viable and reduced, but the right testis was found to be gangrenous (Fig 1). There was a doubtful improvement in vascularity, so the testis was preserved, and right herniotomy was completed. The postoperative period was uneventful and the baby was discharged with plan for reassessment of testicular vascularity later. On postoperative day 2, the baby presented again with complaints of bilious vomiting and refusal of feeds. On examination, the neonate was dehydrated with mild abdominal distension and an obstructed left inguinal hernia. The baby was immediately taken for surgery. Intraoperatively, findings were similar to the previous surgery: the bowel loops were viable and reduced and the left testis was gangrenous (Fig 2). The left testis was preserved and herniotomy was completed.

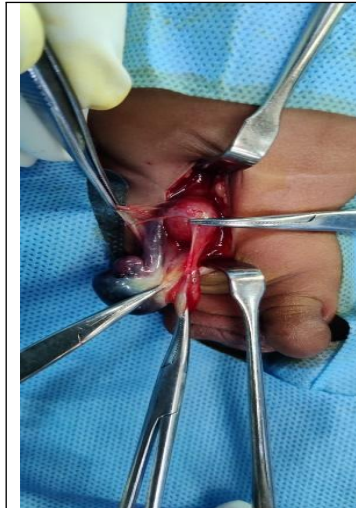


Figure 1 Testicular gangrene caused by right obstructed inguinal hernia



Figure 2 Testicular gangrene caused by left obstructed inguinal hernia

IV.

V. DISCUSSION

Inguinal hernia presents with swelling, more visible during crying or straining. Most hernias reduce spontaneously and do not cause significant symptoms. Often, swelling may not be noticed initially, and clinical attention is sought only when it becomes irreducible. Although complications such as irreducibility, incarceration, obstruction and strangulation are common in inguinal hernia, testicular gangrene is rare. This occurs due to the pressure effect of the herniated contents on cord structures, which in turn compromises blood supply and results in ischemia. Neonatal anesthesia is a major challenge. Risk and problems are compounded when the neonate is having intestinal obstruction with fluid and electrolyte imbalance and there is high risk of vomiting and aspiration during anesthesia. The reported incidence of testicular ischemia in obstructed inguinal hernia is 5 - 34%^{6,7}. In our patient, even though the testis was gangrenous, orchidectomy was not performed, as there was a faint hope of revascularization. It has been reported that in 27% to 50% of cases, compromised vascularity is reversible and normalcy could be achieved^{9,10}. Studies are there to substantiate that preservation of testis with compromised vascularity do not result in adverse impact on the opposite testis⁸. In our case, compromise of vascularity occurred on both sides due to obstructed hernia and orchidectomy could have resulted in a male child without testis. Our experience underlines the need

for managing neonatal obstructed hernia with extreme urgency.

VI. CONCLUSION

Timely diagnosis and appropriate management of inguinal hernia can prevent major complications like irreducibility, incarceration, obstruction and strangulation. There is a definite incidence of vascular compromise of the testis in complicated hernia. Preservation of the testis is advisable as various studies are there demonstrating revascularization without impacting the contralateral testis. The possibility of bilateral disease is an additional point to support the preservation of the testis.

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