Strangulation - a rare complication of inguinal hernia in a neonate

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ABSTRACT

Strangulation is a rare complication of incarcerated inguinoscrotal hernia in the neonate and infants. We report a case of a 15-day old male neonate, who presented with strangulated inguinal hernia containing loop of ileum. Resection of the gangrenous part of the ileum was done and end-to-end anastomosis was performed. Strangulated inguinal hernia in neonates is a rare occurrence.

Keywords: Incarceration; Inguinal hernia; Neonate; Strangulation.

INTRODUCTION

Inguinal hernia is one of the commonest pediatric surgical conditions, which can be complicated by incarceration, intestinal obstruction and strangulation with consequent significant morbidity. The risk of incarceration of inguinal hernia is higher in the neonatal and early infancy period and is easily prevented by early diagnosis and treatment[1,2].

Early reduction of the hernia followed by elective herniotomy is the standard treatment if there is incarceration. Emergency surgical intervention is, however, required in case of suspected or established strangulation.

CASE REPORT

A 15-day old term baby boy presented with a 2 days history of irreducible swelling in the right inguinoscrotal region. The child had refused feeds and also become irritable. He had abdominal distension with one episode of bilious vomiting and redness of the swelling. The parents had noticed a right reducible inguinoscrotal swelling since birth.

The boy's weight was 2.5 kg at presentation. He was dehydrated, pale and had a temperature of 37.5 degree Celcius. The heart rate was 140 beats/min. Chest examination was normal. Overlying skin was reddened. Rectal examination showed empty rectum. The Haemoglobin was 19g/dl, packed cell volume was 53.0%, white cell count was 12.5×103/cumm. Renal function, liver function and serum electrolytes were in normal limits. Dehydration was corrected. An X-ray abdomen erect was done which revealed multiple air fluid levels with bowel gas in the right scrotum. An ultrasound scan of the right inguinoscrotal region revealed scrotal wall oedema and herniated bowel with reduction of vascularity, suggestive of right sided strangulated inguinal hernia.

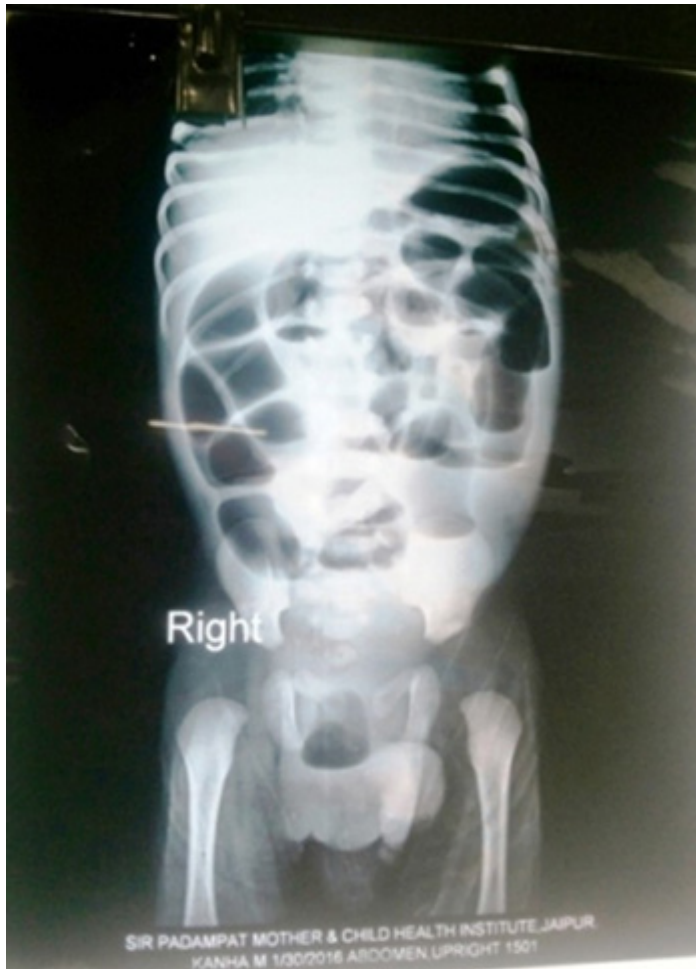

Figure 1. X-ray abdomen showing gas in right scrotum side

Surgery performed through a right inguinal incision revealed a strangulated inguinal hernia containing a loop of ileum. The right testes was normal. The gangrenous segment of ileum was resected and end-to-end anastomosis was done. Herniotomy was performed and the inguinal incision closed. The patient had an uneventful post operative course and was discharged on the 7th post-operative day.

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Figure 2. Intra operative photo showing gangrenous part of ileum

DISCUSSION

Congenital inguinal hernia is one of the commonest surgical conditions in children, which occurs as a result of the failure of the processes vaginalis to obliterate. Boys are 10 to 12 times more affected than girls. It is also reported more frequently in the premature.

The reported incidence of inguinal hernia varies from 0.8% to 4.4% in children[3]. The risk of incarceration of inguinal hernia in children varies between 5 to 23.6%, the highest reported being 60% in the first 6 months of life. The risk of strangulation following incarcerated inguinal hernia in infants is very low and ranges between 0 to 1.8%[4,5]. So, our case is a very rare presentation of inguinal hernia in a neonate.

Neglect of inguinal hernias in infants may lead to incarceration with subsequent strangulation and faecal fistula formation. Strangulation may be associated with testicular ischemia and infarction[6,7]. This would necessitate orchidectomy. In our case, the testes was preserved. In some reports the testes were preserved[3]. Scrotal faecal fistula in incarcerated inguinal hernia is an extremely rare complication and only eight such cases have been reported in world literature till date[7,9]. This complication appears to occur only in developing countries and was due to late presentation.

The preferred and gold standard management of incarcerated inguinal hernia in children without evidence of strangulation is non-operative reduction under analgesia and sedation followed by an elective herniotomy to avoid septicemia. The principle of early referral and repair of inguinal hernia should be encouraged to avoid morbidity and possible avoidable mortality[9].

Unrelieved strangulation will, however, increase the likelihood of septic complications and mortality associated with neonatal intestinal obstruction. Therefore urgent surgical exploration with bowel resection and end-to-end anastomosis is necessary to avert this.

CONCLUSIONS

Health education coupled with early referral and prompt repair of inguinal hernia in neonates and infants would reduce this complication.

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