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Case Report

INTESTINAL ATRESIA : A CASE REPORT

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Abstract

The outcome of intestinal atresia following surgical repair is very good. In general, morbidity and mortality depend upon type of atresia, level of atresia and associated medical conditions such as prematurity or cystic fibrosis, other congenital anomalies, the complexity of the lesion, and surgical complications (anastomotic leakage, functional obstruction at the site of anastomosis).[-1-2] But complete management of these patient is difficult. We managed a patient with type-IIIa ileal atresia, the outcome of which was excellent.

Introduction

Atresia – an atresia is a complete congenital obstruction of the intestinal lumen. Intestinal atresia is one of the most frequent causes of bowel obstruction in the newborn and can occur at any point in the gastrointestinal tract.[3] The ileum is the most commonly affected site.

It may be a very tight stenosis with no functional orifice, or a thick septum with the bowel in continuity, or a missing segment with a gap. Atresia beyond the duodenum can occur at any point , most frequently in the distal ileum. It is the commonest cause of congenital intestinal obstruction and about 30% of all neonatal intestinal obstruction. Most jejunoileal atresia is the result of a late intrauterine mesenteric vascular catastrophe.[4]

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Case Report

A term male baby weighing 2900 grams was born by cesarean section to a 4th gravida of 37 years old diabetic mother at BIRDEM hospital. At the age of 04 days, baby was referred to Dhaka Medical College and admitted in our department with the complaints of no passage of meconium since birth, several episodes of projectile bilious vomiting since birth and huge abdominal distention for 02 days. At 38 weeks of gestation, antenatal sonogram revealed polyhydroamnions; no other anomaly was detected.

On examination patient was ill looking, average body build, poor nutrition, not anaemic, non-icteric, moderately dehydrated, normal temperature, respiratory rate-40 breaths/min.

Abdominal examination revealed – huge abdominal distention , movement was slightly restricted, no visible swelling/peristalsis/ scar mark, umbilicus was centrally placed, hernia orifices were intact. On palpation-abdomen was non-tender, no mass was palpable, liver / spleen not palpable, kidneys were not ballotable. Bowel sound was absent.

Perineal inspection – anus was at normal position, there was no anal fissure or fistula. Anorectal examination- a well lubricated 08 Fr. Foley's catheter was introduced through the anus, which was easily negotiated up to 10 cm from the anal verge. Only thick whitish mucus plug came out on per-rectal irrigation with 20 ml normal saline.

Other systemic examination revealed no abnormality.

Some investigations were done:

Plain X-ray abdomen in erect posture including both dome of diaphragm showed- markedly distended stomach, duodenum and few proximal intestinal air.

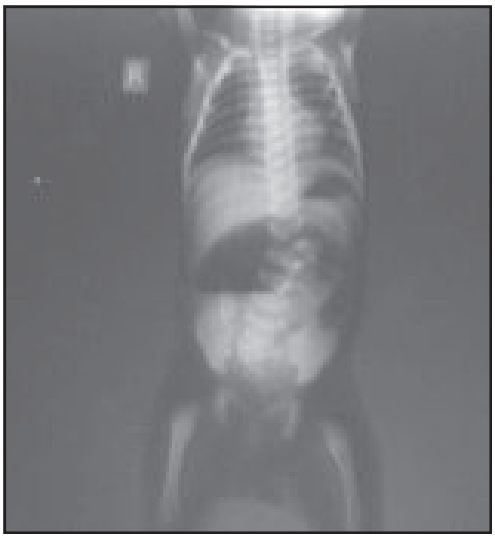

Fig.-1:*Plain X-ray abdomen in erect posture (Baby gram)*

Complete blood count and serum electrolytes were within normal limit.

After clinical, laboratory and radiological evaluation preoperatively it was diagnosed as a case of neonatal intestinal obstruction due to intestinal atresia. The baby was resuscitated properly and was taken for operation 04 hours after admission.

Type-IIIa distal ileal atresia was confirmed at surgery. Excision of distal atretic part of ileum (about 05cm), ceum and proximal part of ascending colon was done. To save the time and to avoid anastomotic leakage, proximally end ileostomy and distally mucus fistula (stoma of ascending colon) was done.

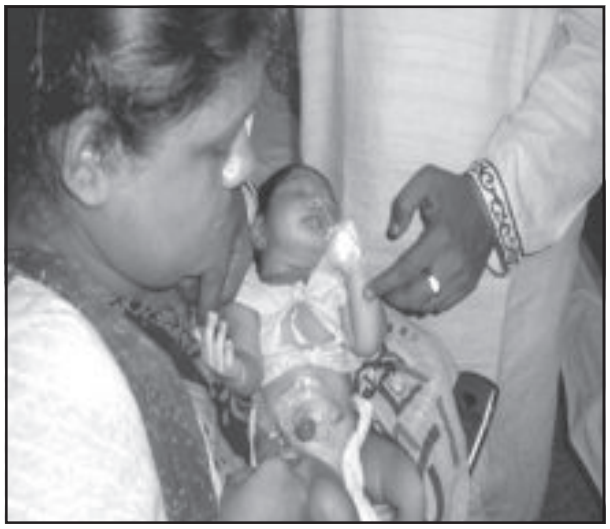

Fig.-2:*Patient with end ileostomy and mucus fistula*

Total operating time was 75 min. Postoperative recovery was uneventful. From the 14th post-operative day (POD) rectal and mucus fistula (distal loop) irrigation was started twice daily with normal saline. Post-operative stoma care and nutritional management became very difficult. After 02 months decision made for closing the stoma. On 5th POD of stoma closure, feeding started. After that the baby started to gain body wait.

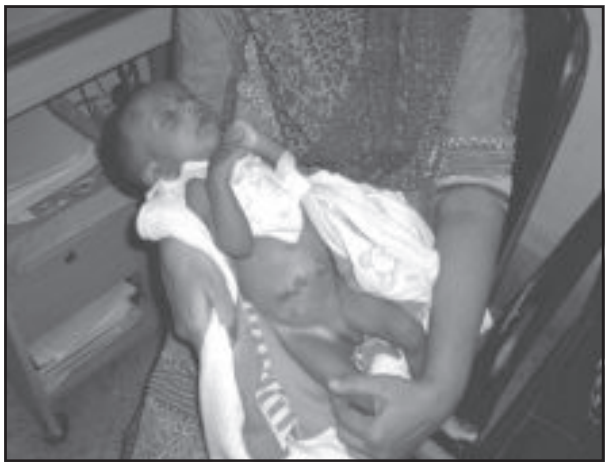

Fig.-3: *After 2 months closure of the stoma*

Discussion

The incidence of jejunoileal atresia has been reported from as high as 1 in 330 to 1 in 1500 live births.[3] Boys and girls are equally affected.[1]The risk for development of jejunoileal atresia is increased after maternal use of pseudoephedrine alone and in combination with acetaminophen and in mothers with migraine headaches receiving ergotamine and caffeine(Cafergot) during pregnancy.[5]

Various eitiopathogenetic mechanisms have been proposed to explain the development of intestinal atresia and their unusual concurrence.[6,7] Environmental factors such as trauma or hypoxia in early fetal development were likely to be responsible when jejunoileal atresia are found in association with anomalies such as malrotation.[5] A mesenteric vascular accident has been implicated as a causative factor for intestinal atresia.[4] Antenatal vascular accidents can result in four types of lesions depending on the severity of the accident and the subsequent healing: short bowel, intestinal stenosis, intestinal atresia, and enteric duplication.[6] A baby with multiple atresias has the evidence of ischemic insult in the form of intra-abdominal calcification.[8]

Prognosis improved with more distal obstructions, with a 75% survival rate in case of ileal atresia. But mortality increases in case of multiple atresias (57%), apple-peel atresias (71%) and when atresia associated with meconium ileus (50%) and gastroschisis (66%).[1 ,9-12]

Conclusion:

Timely and adequate resuscitation followed by meticulous expert surgical intervention increases success rate.

References

1. de Lorimier AA, Fonkalsrud EW, Hays DM:Congenital atresia and stenosis of the jejunum and ileum. Surgery 1969;65:819-827.
2. Nixon HH, Tawes R: Etiology and treatment of small intestinal atresia: Analysis of a series of 127 jejunoileal atresia and comparison with 62 duodenal atresia. Surgery 1971;69:41-51.
3. Evans CH: Atresia of the gastrointestinal tract. Surg Gynecol Obstet 1951;92:1-8.
4. Louw JH, Barnard CN: Congenital intestinal atresia: Observations on its origin. Lancet 1955;2:1065-1067.
5. Graham JN, Marin-Padilla M, Hoefnagel D: Jejunal atresia associated with Cafergot ingestion during pregnancy. Clin Pediatr 1983;22:226
6. Hellish RW, Koop CE. Clinical manifestations of duplication of the bowel. Pediatrics. 1961; 27:397-407.
7. Favara BE, Franciosi RA, Akers DR. Enteric duplications. Thirty seven cases: a vascular theory of pathogenesis. Am J Dis Child. 1971; 122:501-6.
8. Steiner Z, Mogilner J. A rare case of completely isolated duplication cyst of the alimentary tract. J Pediatr Surg. 1999; 34:1284–6.
9. Grosfeld JL; alimentary tract obstruction in the newborn. Curr Probl Pediatr 1975;5:3-47.
10. Martin LW, Zerella JT:Jejunoileal atresia: Proposed classification. J Pediatr surg 1976;11:399-404.
11. Puri P, Fujimoto T: New observations in the pathogenesis of multiple intestinal atresias. J Pediatr surg 1988;23:221-225.
12. Rescorla FJ, Grosfeld JL: Intestinal atresia and stenosis: Analysis of survival in 120 cases. Surgery 1983;98:668-676.