SIGMOID ATRESIA: A RARE CAUSE OF NEONATAL INTESTINAL OBSTRUCTION

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ABSTRACT

Intestinal obstruction is common in neonates; however, Intestinal obstruction due to sigmoid atresia is very rare. We present a case of sigmoid atresia, suspected from clinical examination and radiological investigations on day two of life, and subsequently confirmed at surgery and histopathology. Sigmoid atresia Type 3(a) was noticed per operatively. Resection and primary anastomosis was done with proximal covering stoma. The patient was discharged on 7th post operative day without any complications.

Key words: *Neonate, Intestinal atresia, Sigmoid colon.*

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INTRODUCTION

Intestinal obstruction due to colonic atresia is very rare[1], and usually results from intrauterine vascular insults[2]. The recognized prevalence is 1 per 15,000 to 60,000[1,] live births. Plain radiograph shows presence of multiple air fluid levels and absence of gas in rectum. Contrast enema will confirm the diagnosis.[3]

We here present a case of sigmoid atresia, suspected from clinical examination and radiological investigations on day two of life, and subsequently confirmed at surgery and histopathology.

CASE REPORT

A two days old female child, 2.8kg of weight, full term, born by normal vaginal spontaneous delivery at Khyber Teaching Hospital was referred to our department from Nursery unit, with bilious vomiting, progressive abdominal distension and failure to pass meconium.

The child was pink, not icteric; heart rate was 120/min, respiratory rate of 32/min and blood pressure of 75/55 mmHg. Abdomen was distended with visible loops, there was no erythema or oedema of abdominal wall, no mass was palpable. There was no organomegaly. Rectum was empty on per rectal examination, rest of examination was normal.

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In differential diagnosis, small gut atresia, Hirschprung's disease, and meconium plug syndrome were considered

On investigations haemoglobin was 16gm/dl, serum electrolytes, blood urea/sugar, and serum creatinine were within normal limits. Plain roentgenogram of abdomen showed multiple air fluid levels almost occupying the whole abdomen and no gas was seen in the rectum. Contrast enema with gastrograffin showed micro-colon (rectum and sigmoid) and contrast failed to pass proximally. Radiological findings were consistent with sigmoid atresia

The neonate was explored by a right supraumbilical transverse muscle cutting incision, laparotomy findings were dilated transverse and descending colon and atretic sigmoid and rectum (Type 3(a) atresia) Colo-colic anastomosis was done with proximal covering stoma, specimen was sent for histopathology to rule out association with Hirschprung disease. Post operative course was uneventful and patient was discharged on 7th post operative day, two months later stoma was closed and patient is doing well 1 year after surgery

DISCUSSION

Congenital abnormalities of the gastrointestinal tract are a significant cause of morbidity in children. These abnormalities include small gut atresia, obstruction of large gut, anorectal malformations, and abnormalities of rotation and fixation. Large gut obstruction can be due to Hirschprung disease, colonic atresia, meconium plug syndrome and small left colon syndrome.

Large gut atresias are very rare and accounts for 5-15% of intestinal atresias[1,4]. They are believed to results from intrauterine vascular insults. More than 75% of these atresias occur proximal to splenic flexure and atresias distal to splenic flexure are very rare. Colonic atresias may be associated with proximal small gut

atresias in 1/3 rd of the patients, Hirschprungs disease[5] and anorectal malformation[6,7]. In our patient there were no associated anomalies. Various types of atresias include: Type I- One or more septa or diaphragms completely occlude the lumen; Type II- Proximal and distal ends are joined by a thread like structure. There may/ not be associated with mesenteric defect. Type III- Proximal and distal blind ends are completely separated. The adjoining mesentery has V-shaped defect.

Antenatal diagnosis is difficult and expert ultrasonologist can help in antenatal diagnosis. Plain x ray is usually non specific and shows features of low intestinal obstruction. Diagnosis can be confirmed by contrast enema and is the study of choice. Surgical options include primary anastomosis[8] or staged procedure [9,10]. In Japan a rare case of membranous atresia of sigmoid atresia, two staged repair was done[10]. Uncomplicated colonic atresia can be managed by primary repair with little morbidity[11]. In our patient we did primary anastomisis.

Retrospective analysis of the records of newborns with gastrointestinal (GI) atresias in a 16-year period in India revealed that more than 25% of patients had genetically-influenced atresias.[12] In our case there was no previous history of atresias in family.

Although sigmoid atresias are un-common but should be considered in differential diagnosis of neonates presented with progressive abdominal distension and obstruction

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CONFLICT OF INTEREST
Authors declare no conflict of interest