Case Report
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Primary Small Bowel Volvulus in a Neonate: Case Report.

Osifo O.D, Ogbomo R.O, Igbinovia E.
Paediatric Surgery Unit, Department of Surgery,
University of Benin Teaching Hospital, Benin City, Nigeria.

Summary

Primary small intestinal volvulus is rare. Volvulus of the small intestinal usually occurs secondary to malrotation of the bowel. This is a report of a neonate who presented with gangrenous primary small bowel volvulus. Although the surgery was successful, the patient continued to deteriorate until death after sixteen days on admission.

Keywords: Volvulus, small intestine, gangrene.

Introduction

Volvulus of the small intestine occurring in a normally rotated and fixed bowel is very rare and usually affects the small intestine in neonates and infants. Volvulus of the small intestine is usually orchestrated by abnormality of intestinal rotation and fixation[1]. Majority present in neonatal period and most are only correctly diagnosed intraoperatively. Mortality from this condition is usually high when patient present late[2-4], and when there is diagnostic difficulty and lack of neonatal intensive care facilities. This is a report of a neonate who was managed for a complicated primary small intestinal volvulus in a tertiary health centre in a developing country.

Case Report

A 12-hour-old male neonate was delivered by a 28-year-old Para $^{2+1}$ lady at term. He presented at the Special Care Baby Unit of the University of Benin Teaching Hospital, Benin City, Nigeria, on account of gross abdominal distension and profuse bilious vomiting birth. There was a moderate polyhadraminous noticed during the supervised antenatal care. Delivery was in the hospital; the baby cried immediately at birth but failed to pass meconium.

Examination revealed a full term male neonate with grossly distended, tensed, oedematous abdomen and hyperaemia over the right upper quadrant. Plain abdominal X-ray showed multiple air-fluid levels at upper abdomen with absence of pelvic gas. Abdominal ultrasound scan showed a multi cystic mass at the same location in the right upper quadrant of the abdomen.

All the electrolytes (except potassium: 2.3mmol/l) and haematocrit were normal. He was resuscitated and had exploratory laparotomy 7 hours after presentation through an upper transverse incision. A 720° clockwise twist of the small intestine on its mesentery extending 40cm from ligament of Treitz to 30cm from ileocaecal junction was found. The duodenojejunal junction was normally located to the left of the midline and the caecum was in the right iliac fossa. The involved loop was gangrenous and perforated. The site of perforation was attached to inferior surface of the right lobe of the liver by fibrinous adhesion. The distal bowel segment was collapsed and contained no meconium. The other intra-abdominal viscera were normal.

The gangrenous bowel was resected and primary jejuno-ileal anastomosis was effected. He moved bowels on the third post-operative day and the wound satisfactorily healed on the seventh day after operation. There was, however, persistent failure to tolerate orally even though a repeat plain abdominal X-ray showed well distributed bowel gas shadows down to the rectum. Total parenteral nutrition was not available and the baby could only be managed with

Correspondence: Osifo O.D, Paediatric Surgery Unit, Dept. of

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dextrose water, electrolytes and multivitamins. He subsequently developed progressive weight loss, hypotononia, lethargy and weak respiratory efforts. These continued until fourteen days after operation when he deteriorated markedly and died on the sixteenth day of admission.

Discussion

Primary (congenital) volvulus of the small intestine is rare. Although duplication cyst, retroperitoneal band, meconium plug, Meckel's diverticulum with band and muscular wall defect of the gut are thought to be precipitating factors[4-8], in most cases no aetiological factors could be found.

Incidence of bowel gangrene is higher in primary volvulus than in volvulus secondary to malrotation[3,4]. The rarity of primary volvulus of the bowel and its non specific clinical features may make preoperative diagnosis difficult with attendant delay in operative intervention. A high index of suspicion, urgent radiological investigations[9,10] and therefore, timely surgical intervention are necessary to prevent the bowel from gangrene.

The return of adequate bowel function is a problem after surgical resection of intestine in neonate and so total parenteral nutrition (TPN) may be necessary after the operation. The bowel function

Un volvulus intestinal qui complique une blessure abdominale contondante: un rapport de cas.

Résumé

Une fille âgée de 7 ans affligée d'un traumatisme abdominal contondant a contracté, par la suite, un volvulus intestinal. L'intervention chirurgicale a été différée à cause de l'incertitude diagnostique. La chirurgie effectuée 4 jours après le début des symptômes a révélé l'hématome jéjunal et un iléon gangreneux dus au volvulus. Elle a eu une récupération sans incidents après une résection intestinale primaire et l'anastomose. En soignant tout traumatisme abdominal, il faut toujours tenir compte de la possibilité d'une pathologie abdominale coexistante. ***Mots-clés:*** Traumatisme, abdomen, volvulus

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