Case Report
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Midgut Volvulus Complicating Blunt Abdominal Injury: A Case Report.

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Summary

A 7 year old girl had blunt abdominal trauma and subsequently developed midgut volvulus. Surgical intervention was delayed because of diagnostic uncertainty. Surgery done 4 days after onset of symptoms revealed jejunal haematoma and gangrenous ileum due to volvulus. She had an uneventful recovery after a primary bowel resection and anastomosis. A possibility of a coexisting abdominal pathology must be borne in mind in managing any case of abdominal trauma.

Keywords: Trauma, Abdomen, Volvulus

Introduction

Volvulus of the bowel is the twisting of a loop of the bowel around its mesentery. The midgut is the region most commonly involved, commonly seen in malrotation of the bowel[1]. Volvulus is a dire emergency as the involved bowel may get gangrenous if not untwisted sufficiently early. Early recognition and intervention is, therefore, imperative if the bowel is to be saved and the problems of short bowel syndrome avoided. Acute midgut volvulus following a blunt abdominal injury may pose diagnostic difficulties because most of the early features may be attributed to the trauma. However, a high index of suspicion and attention to clinical and radiological details may help in the diagnosis. In this report, we present our experience with this case of midgut volvulus complica-ting blunt abdominal injury.

Case Report

A 7 year old girl presented with a three week history of severe abdominal pain following blows and kicks to her abdomen from an older male during a fight. She had been hospitalized in a peripheral hospital for two weeks with remarkable improvement and was consequently discharged. Four days before presentation to us, however, she had developed sudden worsening of the abdominal pain after a fall at home. This was associated with repeated vomiting, abdominal distension and passage of melaena. Subsequent management at the referring hospital did not improve her condition. She was later referred to our hospital. The past medical and surgical history was not positively contributory.

Assessment revealed a young, acutely ill looking, pale, girl; anicteric, febrile (37.6^{0}C), tachypnoeic (40 cycles/ min) and dehydrated (dry tongue, poor skin tugour). The abdomen was grossly distended, tense, and moderately tender. The bowel sounds were depressed and a digital rectal examination showed an empty rectum. A diagnosis of blunt abdominal injury with peritonitis was made, to rule out typhoid perforation of the bowel. Resuscitation of patient was commenced immediately with investigations.

An abdominopelvic ultrasound showed intact liver and spleen, free peritoneal fluid and dilated loops of bowel. Plain abdominal X-ray showed dilated loops of bowel and multiple air fluid levels. The serum electrolytes were normal but the urea and creatinine were marginally elevated.

At exploratory laparotomy, the findings were- turbid foul smelling peritoneal effluence, volvulus involving the ileum and a mobile caeum, 20cm

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Fig. 1: Gangrenous ileal segment and haematoma causing obstruction.

gangrenous segment of the ileum about 30cm from the ileocaecal junction, a 10x12 cm fusiform subserosal haematoma of the jejunum bulging into the jejunal lumen and causing obstruction (fig 1)

The volvulus was untwisted, gangrenous bowel resected and anastomosed, haematoma evacuated and peritoneal effluence mopped up. The post operative recovery was uneventful and patient was discharged two weeks later.

Discussion

Acute volvulus and consequent gangrene of portions of the midgut is a dreaded consequence of intestinal malrotation. Most patients are seen in the neonatal period and before one year of life. Patients who present in later life often have previous history of vague or less severe abdominal pain. Unusual movement of the torso, abnormal intestinal peristalsis or segmental bowel distension may be precipitating factors.

Early recognition and operation may obviate the need for bowel resection. Late intervention, however, may lead to resection of variable amounts of the bowel due to gangrene, leading to short bowel syndrome. Late intervention is usually due to diagnostic dilemma. Lack of previous history of abdominal pain and the history of abdominal trauma in the index patient made the attending physician to attribute the symptoms to the trauma, leading to misdiagnosis and delayed intervention. The fall four days before referral may be a cause or consequence of the sudden abdominal pain. We believe that it was at this point that the volvulus occurred. The subsequent deterioration of the patient with features of intestinal obstruction only suggested a severe acute abdomen requiring urgent surgical intervention.

The finding of a jejunal haematoma attests to significant trauma. Yoshida et al[3] and Hardacare et al[4] reported a similar case which was complicated by volvulus. In this report the volvulus occurred far distal from the site of volvulus, indicating that there may not be a cause-effect relationship. It is probable that the haematoma caused bowel obstructive because the

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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