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Case Report

# Non-traumatic rupture of eventration of diaphragm in a child

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## Introduction

Eventration of the diaphragm is a rare condition where the diaphragm is permanently elevated, but retains its continuity and attachments to the costal margins.[1] This condition affects less than 0.05% of general population and is more common in males.[2] Rupture of eventration of diaphragm, which is extremely rare in a child, can be either traumatic or spontaneous.[3–9] As there is paucity of literature of spontaneous rupture of eventration of diaphragm in children, we report a child with non-traumatic rupture of eventration of diaphragm.

## Case report

A 5 year old male patient presented to the pediatric emergency with history of diffuse pain abdomen, repeated vomiting, and constipation since 4 days and fever since 1 day. There was no history of cough, chest in drawings or fast breathing. In the past, there was no significant history of respiratory illnesses. Clinically the child was having mild dehydration with low grade fever, however there was no features of hemodynamic instability or respiratory distress. The abdomen was tender at the left hypochondrium, but there was no significant distension or guarding. Auscultation of the chest revealed bowel sounds associated with decreased breath sounds in left lower hemithorax. Radiograph chest and abdomen showed dilated bowel loops in the abdomen extending into the left lower chest causing mediastinal shift toward right (Fig. 1A). Contrast enhanced CT scan of the thorax confirmed the chest X-ray findings (Fig. 1B). All hematological and metabolic parameters including the blood gas were normal.

Surgery was undertaken with a probable diagnosis of left sided diaphragmatic hernia. Laparotomy was done through the left subcostal incision, which revealed a grossly thinned out diaphragm with a rent of 2 cm at its apex (Fig. 2A). Through the rent, part of the transverse colon and the omentum was herniating causing proximal colonic dilatation. The contents were reduced and the obstruction got relieved. The bowel seemed to be viable and the gangrenous omentum was excised (Fig. 2B). The rent was closed with vicryl and thinned out diaphragm was plicated with nonabsorbable sutures (Fig. 3).

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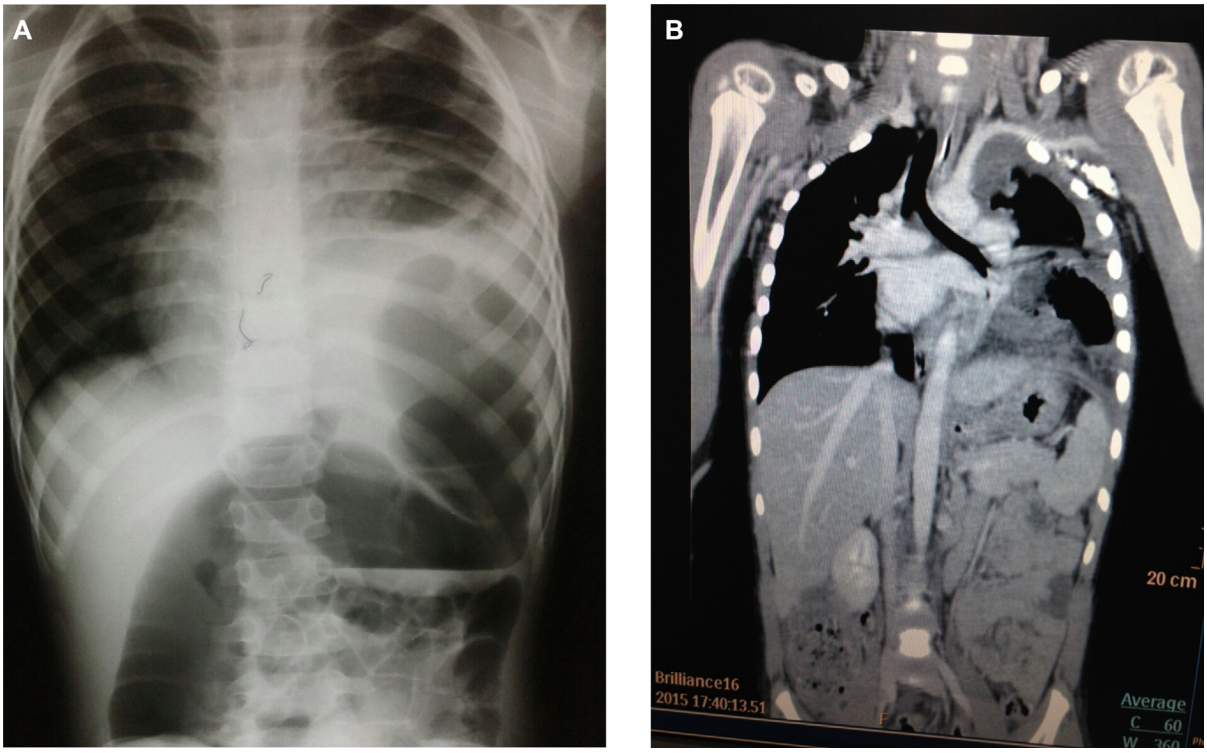


**Fig. 1 – (A and B) Raised left hemidiaphragm with abdominal contents inside left hemithorax with mediastinal shift to right (radiograph and Computed Tomography (CT) respectively of chest and abdomen).**

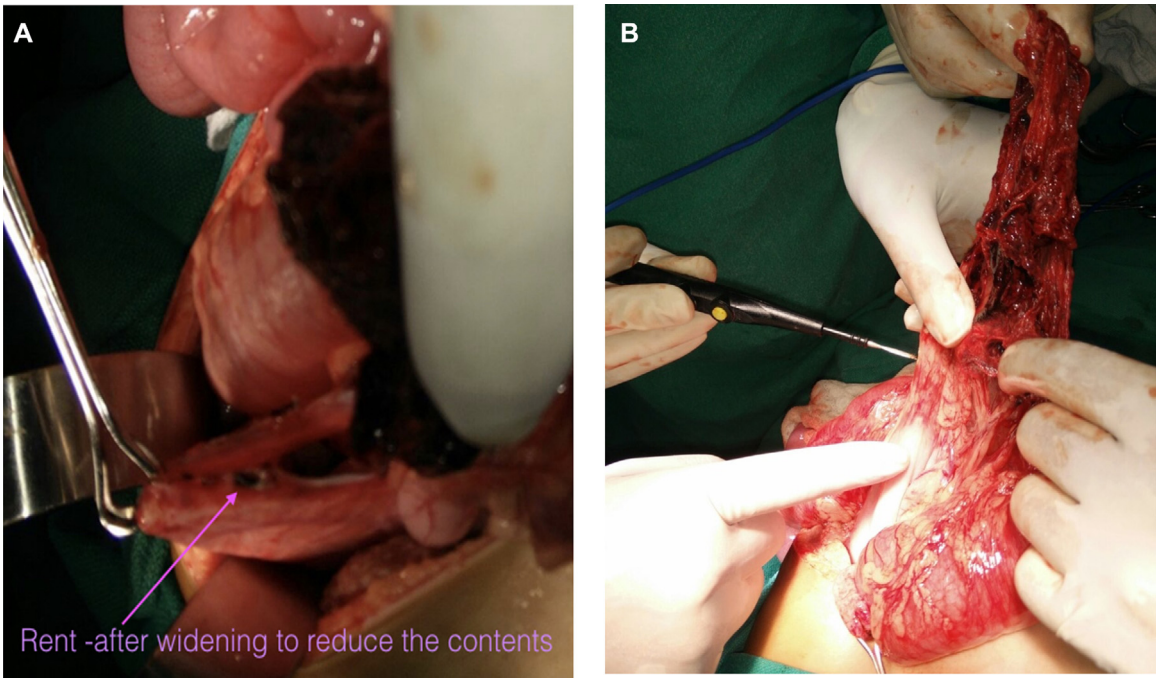


**Fig. 2 – (A and B) Rent (after widening) and gangrenous omentum as seen intra op.**

Post operatively the child recovered well, and the feeds were resumed on postop day 3 and were discharged at the end of a week. The child was asymptomatic during the follow up and the radiograph chest showed well-expanded lungs and near normal contour of the diaphragm (Fig. 4).

## Discussion

Eventration of diaphragm often remains asymptomatic for long and may present with recurrent respiratory tract

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