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Gastric Volvulus Mimicking Pneumothorax In A Case Of Congenital Diaphragmatic Hernia- A Rare Occurrence

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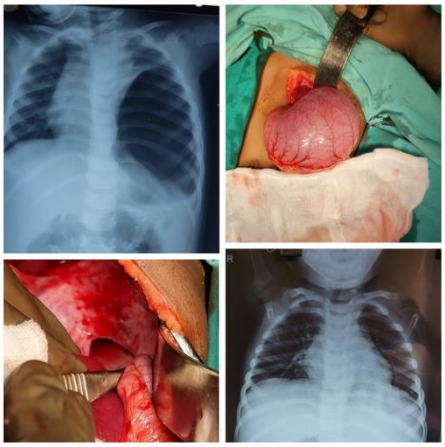
I. Introduction:

- Congenital diaphragmatic hernia (CDH) is a birth defect characterised by abnormal opening in the diaphragm causing protrusion of abdominal content into the thoracic cavity resulting in intrusion of lung development.
- It is an uncommon condition that is usually diagnosed on antenatal scans or in the neonatal period. However, occasionally CDH presents in older children and adults.
- Late presentations are usually defined as those that present after 1 month of age and constitute from 5% to 25% of all CDH cases (1,2). Late-presenting CDH have a better prognosis as they do not exhibit pulmonary hypertension and lung hypoplasia (3). Here we present a 3-year-old boy whose CDH presented like a pneumothorax.

II. Case Report

- A 3-year-old male presented to emergency with history of breathing difficulty and chest pain for 2 hours with 2 episodes of vomiting. Mother was correlating the episode with h /o fall from bed while playing. An outside CT scan report was suggestive of hemo-pneumothorax/lung cyst.
- On examination, there was decreased chest movement and air entry on left side compared to right side with hyper resonant note in view of which chest X ray was done which was suggestive of pneumothorax on initial impression. Child needed 5ltr O2 support with persistent tachypnea.
- Intercostal drain was inserted but there was no significant improvement clinically in the respiratory distress. With the non-resolution of respiratory distress after ICD insertion and clinical history of pain with recurrent retching with little vomitus, inability to pass nasogastric tube (Classical Borchardt's triad), a possibility of Gastric Volvulus with congenital diaphragmatic hernia was considered. Air pushed in Nasogastric tube was well heard in chest.
- All the necessary pre-operative investigations were done and the child was immediately taken up for exploratory laparotomy. A left subcostal incision was given and a left posterolateral defect with regular margins was noted in the diaphragm.
- Grossly dilated stomach and spleen were the hernial contents noted in the left thorax which were placed back in their anatomical locations and the defect was sutured. The procedure was well tolerated and the post operative chest x ray showed normal lung fields. Child was discharged after 6 days and doing well on 3 months follow up.



III. Discussion:

- We present the rare event of a child with a late presenting CDH with signs and symptoms like a pneumothorax. The original chest Xray had all the features of a pneumothorax and the corrective procedure, that is an intercostal drain, was performed.
- It was only after clinical re-examination with no improvement in symptoms, Borchardt's triad signs and discussion with Paediatric surgical team, laparotomy was planned.
- Although reported rarely, there have been cases of CDH presenting like a pneumothorax (4-6) where the gastrothorax was diagnosed on chest X rays but we believe that the x-ray we present here is indistinguishable from a tension pneumothorax.
- Tension pneumothorax in an otherwise well young child in absence of any previous operations and history of trauma is an extremely rare entity, and a tension gastrothorax, although also rare, should be considered.

IV. Conclusion:

This case highlights the importance of detailed clinical examination and considering congenital diaphragmatic hernia as an early differential in children presenting with respiratory distress regardless of age as it is a potentially life-threatening condition if misdiagnosed but leads to a good prognosis if corrected early.

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