

TRAUMATIC DIAPHRAGMATIC HERNIA: A CASE REPORT

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INTRODUCTION:

Traumatic diaphragmatic Hernia [TDH] was first described by Ambrose Parde at autopsy in 1579 and Browditch in 1835 gave the first clinical description of the disease [1,2].

TDH can be caused by direct or indirect violence. The former arises from stab wound, high velocity missiles which are usually diagnosed early and repaired [3-7].

The indirect causes are by blows to the lower chest and upper abdomen and automobile steering wheel injury which are frequently occult [8]

TDH occurs predominantly in the young adult males and mostly on the left than on the right [2-6]. Delayed diagnoses usually leads to complications like obstruction and strangulation of the herniated viscera. Therefore we are presenting a case of a 3year old boy who developed TDH following Road traffic accident [RTA] for 1½ yrs before the final diagnoses was made and treated.

CASE REPORT

AA, a three year old child presented to the Aminu Kano Teaching Hospital (AKTH) with history of cough, difficulty in breathing and weight loss of 1½ years duration. This followed a Road Traffic Accident (RTA) where he was knocked down by a vehicle 1½ years previously.

He vomited small amount of blood at that time for which he was admitted in a private hospital and discharged after treatment. The cough and difficulty in respiration continued. The patient was again seen at a rural hospital where he was placed

on various medications with no improvement. He also had chest X-Ray that was of bad quality and no radiologist report was given. He was then referred to AKTH for further review.

On examination, the child was fully conscious but small for date weighing= 10kg, at 3years. He was dyspneic and tachypneic. There was asymmetry of the chest wall with slight bulge of the left hemithorax. The trachca was deviated to the right and air entry on the left was reduced.

The liver was enlarged 2cm below the coastal margin with smooth surface.

The blood pressure was 90/60mmHg, pulse rate was 120/ min, 1&11 heart sounds were heard.

The laboratory investigation includes PCV of 38% and Hb of 14gm Chest radiograph done (fig 1) showed heart was displaced to the right, and fibrocalcific opacities in the left.

A radiological diagnosis of diaphragmatic hernia was made and a barium meal examination (fig 2) confirmed the herniation of the stomach and small bowel loops into the left hemithorax

DISCUSSION

Traumatic rupture of the diaphragm is a rare injury that occurs secondary to both blunt and penetrating injuries and is usually associated with mortality. Blunt abdominal injuries from automobile accidents are the major precipitant, and has a high incidence of life threatening hemorrhage which is responsible for the morbidity and mortality (8). A rent in the diaphragm is usually followed by herniation of the abdominal contents into the chest (2 - 6). Visceral Herniation may occur in about 33% of patients, resulting in dyspnea, difficulty in breath and cough. Adult males are affected more

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and the LT side is affected more than the RT side and occasionally it occurs bilateral in about 1.5% (2 - 7).

TDR can present acutely or remain latent for a few months to several years (3). Our patient presented 1 1/2 years after the RTA . For early diagnosis, high index of clinical suspicion is necessary (2,8). TDH can be diagnosed on CXR with 33 - 70 % accuracy (5), but this figure decrease in patients who are intubated because the gas in the stomach escapes easily through the NG tube (5,9).

Diagnosis on chest radiograph enhance by the presence of visceral herniation, but hemothorax or concurrent lung disease can obscure a rupture (5). Barium meal/enema is done to confirm the diagnosis especially in the developing world where other imaging modalities such as CT/ MRI are not readily available.

CT scanning increases the diagnostic sensitivity to 66% (10). Magnetic resonance, imaging ultrasound, upper gastrointestinal contrast studies, laparoscopy and tharacoscopy have also been used in diagnosis of TDR (5,11).

Death from TDR is usually associated with other injuries and high mortality is mainly due to lung complication. Emphasis should be on high clinical index, CXR reported by Radiologists and screening of the dome of the diaphragm , so as to hasten diagnosis and laparotomy, thereby reducing morbidity and mortality.

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