

Eventration of Diaphragm Discovered As an Incidental Finding – A Case Report

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ABSTRACT

Eventration of the diaphragm is a relatively rare condition. It is an abnormal elevation of diaphragm in which all or part of the diaphragm is largely composed of fibrous tissue. Clinical manifestation range from asymptomatic to life threatening respiratory distress. We report a 30 year male who presented with mild cough with left diaphragmatic eventration managed conservatively.

Keywords: Diaphragmatic eventration; Asymptomatic; Conservative

INTRODUCTION

Eventration of the diaphragm is an abnormal elevation of one leaf of diaphragm without defects of continuity. The muscular insertions are normal, the normal orifices are sealed and there is no interruption of the pleural or peritoneal layers.¹ It is a condition in which all or part of the diaphragm is largely composed of fibrous tissue with only a few or no interspersed muscle fibres. Eventration in older children and in adults is usually caused by diaphragmatic palsy. It can be complete or partial. Complete eventration almost invariably occurs on the left side and is rare on the right side.²

CASE HISTORY

A 30 year old male presented to us with complaints of cough and on- off fever since 3 days. Also pain in upper abdomen since 1 day. General physical examination was normal. The patient was afebrile at the time of presentation. Respiratory rate, pulse rate and BP were within normal limits. Chest examination revealed decreased movements infra-mammary, infra-axillary and infra- scapular areas. Tactile vocal fremitus was decreased and note was impaired on the left side. Breath sounds were decreased in the left infra-axillary, infra-mammary and infra- scapular areas. Laboratory investigations were within normal limits. Chest X-ray showed showed raised dome of left diaphragm due to the superior displacement of abdominal viscera (gut loops) into diaphragmatic outpouching FIG1. CT scan chest confirmed the findings of the eventration of diaphragm, Figs. 2, 3. There was no herniation of abdominal contents into the thoracic cavity. The mediastinal structures were well opacified with i.v. contrast and appeared normal in outline. There was no evidence of any mediastinal lymph node enlargement. With these radiological findings, a diagnosis of eventration of left diaphragm was made.

DISCUSSION

Atrophy, thinned wall and progressive distension of the diaphragm represent the main characteristics of diaphragmatic eventration. Newborns usually present with acute respiratory failure, but in adults it is generally asymptomatic and is discovered incidentally on normal screening of chest X-ray as was in present case. Symptoms may be present in obese patients as a result of raised intra-abdominal pressure. These symptoms, related to GIT, respiratory embarrassment, and rarely cardiac dysfunction, have been attributed to the anomaly.³ Most healthy patients with isolated diaphragmatic paralysis are asymptomatic or suffer only from mild breathlessness on exertion.



Figure 1: Chest X-ray showing raised left dome of the diaphragm, with well defined left diaphragmatic margin.

The vast majority of these patients don't require surgical treatment and best treated conservatively (e.g. with physical therapy, pulmonary rehabilitation, and counselling on weight loss, if necessary).⁴ Indication for surgery for all children was failure to wean from ventilatory support, while the indications for surgery in the adult group is ventilator dependency and symptomatic dyspnoea.⁵

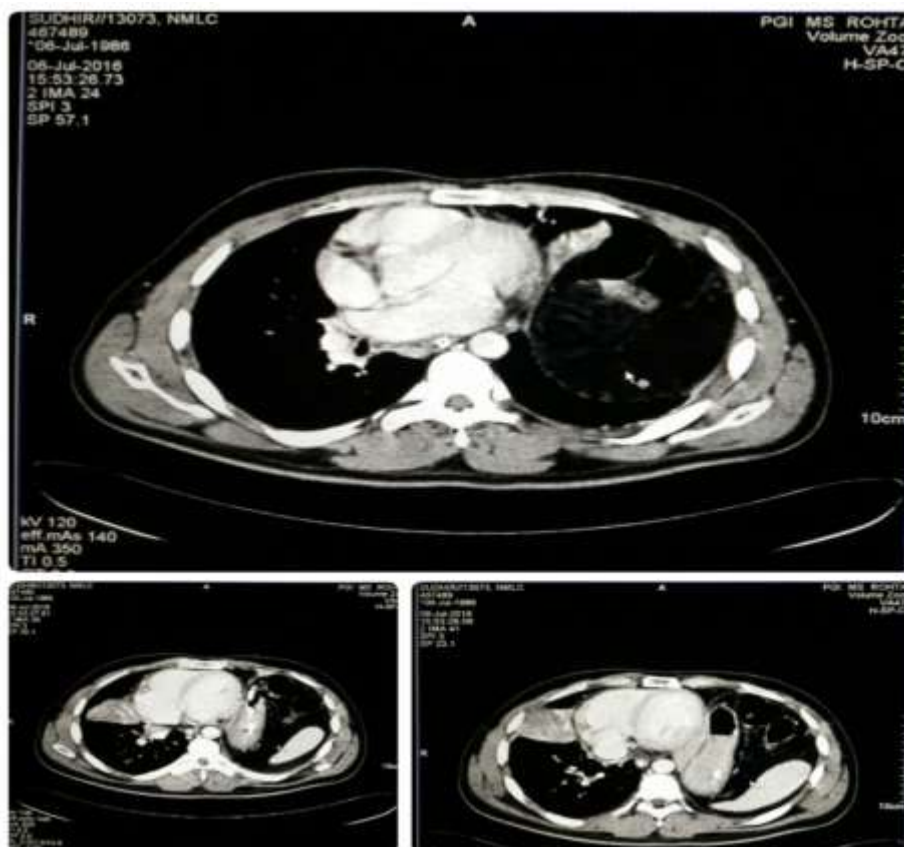


Figure 2: CT chest showing the eventration of the diaphragm on the left side.

Paradoxical movements suggest complete paralysis and if symptomatic, is a strong indication of surgery. Diaphragmatic plication is a standard, well-described technique to treat diaphragmatic eventration. Recently, diaphragmatic plication has also been performed through minimally invasive technique, either laparoscopic⁶ or thoracoscopic.⁷⁻⁹

CONCLUSION

The treatment of eventration of diaphragm is individualized and depends on the degree to which the patient is experiencing symptoms.



Figure 3: CT abdomen coronal section showing the eventration of the diaphragm.

This case demonstrates that patients with asymptomatic eventration of the left diaphragm don't require surgical management and can be treated conservatively.

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