

Right-sided diaphragmatic eventration: A rare entity

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Abstract: Eventration is a well-known congenital malformation of the diaphragm, usually asymptomatic and diagnosed incidentally on chest radiography. It is sometimes associated with a number of other congenital syndromes and anomalies. We report a rare case of eventration of right hemidiaphragm

Keywords: diaphragm, eventration, right sided

I. Introduction

Eventration of diaphragm is a congenital anomaly consisting of failure of muscular development of part or all of one or both hemidiaphragms.¹ Clinically, eventration of diaphragm refers to an abnormal elevation of one leaf of an intact diaphragm as a result of paralysis, fibrosis, aplasia, or atrophy of varying degrees of muscle fibers.² It is usually unilateral, may present at any age, and is more common in male. It can be of two types, partial and complete. Partial eventration is more common on the right side and the complete variety is common on the left side. In some cases, it may be difficult or impossible to distinguish from diaphragmatic paralysis.¹ Complete eventration almost invariably occurs on the left side³ and is rare on the right. We report a case of 60-year-old male with right-sided eventration.

II. Case Report

A 60-year-old male presented to us with complaints of chest pain on right side since one year.

General physical examination was normal. The patient was afebrile during his stay in the hospital. Chest examination revealed decreased movements on right side in inframammary, infra-axillary, and infrascapular areas. Tactile vocal fremitus was decreased and note was dull on the right side. Breath sounds were decreased in the right inframammary, infra-axillary, and infrascapular areas. Tidal percussion was elicited on the right side. Clinically we suspected right side eventration, sub pulmonary effusion.

Laboratory investigations were within normal limits. Chest X-ray showed a homogenous opacity in the right lower zone. The upper margin of the opacity was sharp and had a contour of a diaphragm on posteroanterior (PA) view which was further confirmed with a right lateral view. This increased our suspicion of raised dome of diaphragm. In Ultrasonography the diaphragm was seen as a continuous thin layer above the elevated abdominal viscera and there was no pleural effusion and movements of the right diaphragm were normal but lagging during respiration. With these radiological findings, a diagnosis of eventration of right diaphragm was made.

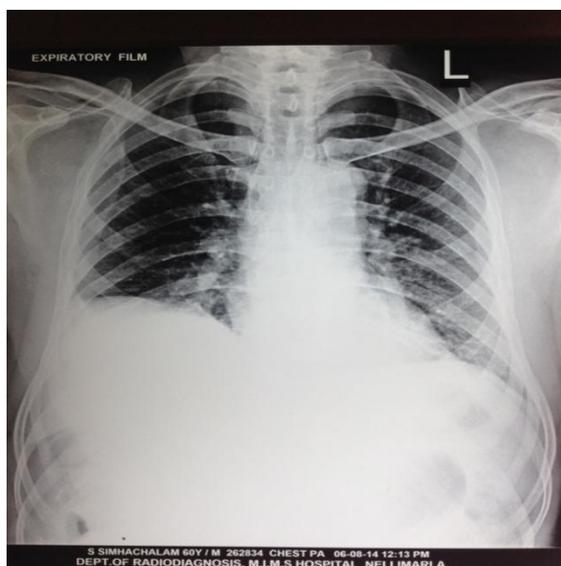


Figure 1 Chest x ray showing right side elevation of diaphragm

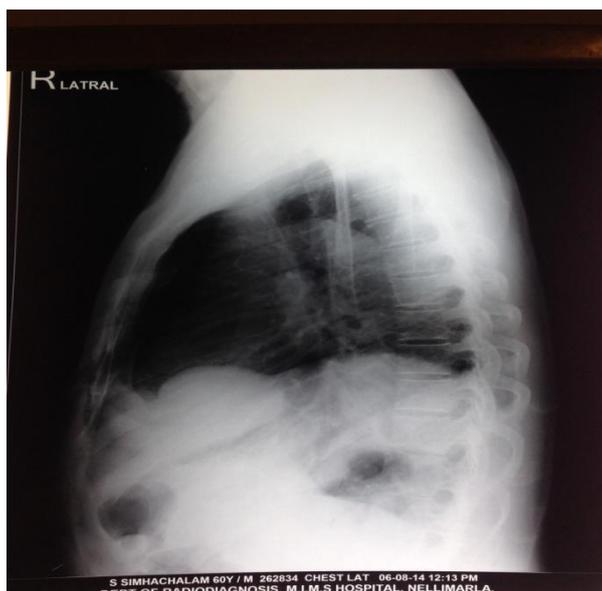


Figure 2 right lateral x ray showing elevated right side diaphragm

III. Discussion

In eventration of the diaphragm, all or part of it is largely composed of fibrous tissue with a few or no interspersed skeletal muscle fibres, presenting radiologically as elevated hemidiaphragm. It is most commonly congenital but may be acquired. Incidence of congenital eventration is 1 in 10,000.(4). Congenital eventration is most commonly unilateral and is seen on the left side. Complete eventration of diaphragm invariably occurs on the left side but partial eventration of the diaphragm occurs virtually on the right side.³ In this case, the complete eventration of diaphragm was seen on the right side which is a rarity. It is almost always asymptomatic and detected on chest radiographs incidentally. Diaphragmatic movement is reduced, paradoxical or absent on fluoroscopy or on ultrasonogram.(5) Contralateral mediastinal displacement with unilateral elevation of the diaphragm goes more in favour of eventration in contrast to unilateral diaphragmatic palsy, the commonest differential diagnosis of eventration.(6)Eventration allows abdominal contents to enter into the thorax, although the continuity of the diaphragm is intact, in contrast to diaphragmatic hernia. Eventration of diaphragm is generally asymptomatic in adults and is discovered incidentally on normal screening of chest X-ray. Symptoms may be present in obese patients as a result of raised intra-abdominal pressure as was in the present case. These symptoms, related to gastrointestinal tract, respiratory embarrassment, and rarely cardiac dysfunction, have been attributed to the anomaly.(7) Asymptomatic patients are managed conservatively but patients with symptoms require surgery. Paradoxical movements suggest complete paralysis and if symptomatic, is a strong indication of surgery. In the present case, a diagnosis of eventration of diaphragm was made based on radiological findings.

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