

Case Report

“Eventration of Diaphragm” Presenting as Respiratory Distress in an Infant

Nasreen Ali¹, Sunil Kumar Agarwalla², Manaswinee Sahoo¹, Debasis Patro¹

¹Junior Resident, ²Associate Professor,
Department of Pediatrics, M.K.C.G Medical College, Berhampur, Ganjam, Odisha-760004, India.

Corresponding Author: Nasreen Ali

ABSTRACT

One of the most common presenting complain in infants is respiratory distress, which is most commonly due to pneumonia and varied etiology including both medical and surgical conditions. But sometimes this may be due to a rare condition like eventration of diaphragm. In this condition the diaphragm is placed at a much higher level than its normal position.

Here we report a case of 2 months old male baby who presented with complaints of respiratory distress since birth. The boy was admitted as a case of pneumonia and a clinical diagnosis of congenital diaphragmatic hernia (left side) was made. But on viewing the x-ray showing the continuity of the diaphragm on both sides, it pointed towards a rare entity **“EVENTRATION OF DIAPHRAGM”**.

Key Words: eventration of diaphragm, respiratory distress, pneumonia

INTRODUCTION

The diaphragm is the major muscle of respiration and separates the thoracic and abdominal cavity. Eventration of diaphragm is defined as a condition in which there is permanent elevation of hemi diaphragm without defects in the continuity. ^[1] It represents 5% of all diaphragmatic anomalies. It occurs 1 in 10000 live births. ^[2] Having male sex and left hemi diaphragmatic predominance. This allows the abdominal contents to rise up into the chest cavity. Eventration of diaphragm may be partial or complete. This occurs due to replacement of muscle fibres by fibrous tissue. ^[3] The clinical features vary from being asymptomatic to respiratory distress. Chest x-ray is the most common and initial investigation which helps to distinguish from congenital diaphragmatic hernia (CHD).

CASE REPORT

A 2 month old male baby was presented to the emergency paediatric ward of MKCG Medical College with a history of respiratory distress since birth. He was delivered full term by caesarean section in a local hospital with history of birth asphyxia. He was admitted in local SNCU and was treated as a case of perinatal asphyxia. On examination the baby was dyspnoeic with respiratory rate of 65/min. There was chest in drawing. The heart sounds were heard more clearly on the right side without any murmur. There was no other abnormality detected. Lab investigations were all within normal limits.

The chest X-ray showed left dome of diaphragm elevated, mediastinum shifted to right side and multiple gas distended bowels seen in left subphrenic region. [Figure 1 and 2]

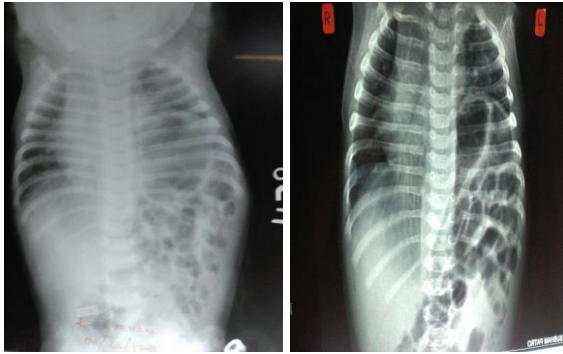


Figure 1: plain chest x-ray

Figure 2: digital chest x-ray showing intact and elevated left diaphragm with mediastinal shift.

This case after a course of antibiotics for pneumonia was referred to SVPGI, Department of Paediatric Surgery, Cuttack for surgical repair and further treatment.

DISCUSSION

The main differential diagnosis is congenital diaphragmatic hernia as in both the entity clinical presentation and radiological features are similar. [3] The differentiation is usually made by chest x-ray by presence of continuity of dome of diaphragm, where as in congenital diaphragmatic hernia there is defect in diaphragm. [4]

It may be congenital due to defect in development of one portion or entire central part of diaphragm, there may be hypoplasia of lung on the affected side making it more prone to recurrent infection and bronchiectasis. On the other hand acquired eventration occurs in older children secondary to trauma, infections as polio, herpes zoster, diphtheria or influenza. [5]

Surgical correction is indicated in any case where there is evidence of respiratory compromise. Before going for the surgery it is important to rule out any other surgical cause of dyspnoea.

Prenatal diagnosis is best done with USG scan at 18-20 weeks of gestation.

CONCLUSION

Eventration of diaphragm present mostly as respiratory distress and may cause respiratory failure if not treated early. Plication of diaphragm is the treatment of choice and its prognosis is excellent. [6]

Proper informed consent was obtained from patients parents for publication of the article.

REFERENCES

1. Gupta P, Khublani T, Anupam, Soni S, Feroz A, Mehrotra A et al. Eventration of the right hemidiaphragm with multiple associations: A rare presentation. *Lung India*. 2014;31(4): 421.
2. Ravisagar P, Abhinav S, Mathur R, Anula S. Eventration of diaphragm presenting as recurrent respiratory tract infections - A case report. *IOSR Journal of Dental and Medical Sciences*. Volume 13, Issue 6 Ver. II (Jun. 2014), PP 33-36
3. Kansal A, Chopra V, Chahal A, Grover C, Singh H, Kansal S. Right-sided diaphragmatic eventration: A rare entity. *Lung India*. 2009;26(2):48.
4. Eventration of the diaphragm in infants [Internet]. Uptodate.com. 2017 [cited 13 March 2017]. Available from: <http://www.uptodate.com/contents/eventration-of-the-diaphragm-in-infants>
5. Christensen P. Eventration of the Diaphragm [Internet]. PubMed Central (PMC). 2017 [cited 13 March 2017]. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1018519/?page=2>
6. Tsugawa C, Kimura K, Nishijima E, Muraji T, Yamaguchi M. Diaphragmatic eventration in infants and children: Is conservative treatment justified? *J Pediatr Surg*. 1997 Nov; 32(11):1643-4..

How to cite this article: Ali N, Agarwalla SK, Sahoo M et al. "Eventration of diaphragm" presenting as respiratory distress in an infant. *Int J Health Sci Res*. 2017; 7(4):484-485.
