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Pleural Effusion Diagnosed And Treated Turned Out To Be Congenital Diaphragmatic Hernia

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Abstract: It is not common to diagnose a medical condition as another condition based on clinical features and investigations which later turns out to be normal because of a congenital lesion. There are many lesions reported mimicking Diaphragmatic Hernia which were treated or found during when operated for the other diagnosis. Here we report a case of Pleural effusion on the left side which was treated as Tuberculosis pleural effusion later which was found to be a congenital Diaphragmatic hernia in a middle age male.

Keywords: Pleural effusion, Congenital Diaphragmatic Hernia, Mimicker

1. INTRODUCTION

Congenital diaphragmatic hernia commonly presents in the first few hours of life and is even diagnosed antenataly. In later age groups misdiagnosis is a distinct possibility, with the risk of serious morbidity and mortality. Late presenting congenital diaphragmatic hernia (CDH) that develops after the neonatal period has various clinical manifestations and can often be misdiagnosed as pleural effusion, pneumonia or pneumothorax in some of the previous reports. Initial chest x-ray, which is performed routinely when a patient with these symptoms visits a hospital, can mimic pleural effusion, pneumonia, or pneumothorax, which can lead to misdiagnosis. This can be connected to serious iatrogenic complications. Without rapid diagnosis and prompt surgical treatment, late presenting CDH can make more serious and disastrous complications. Meanwhile, if they would be quickly identified and correctly repaired, their outcomes are mostly excellent because they have little or no lung hypoplasia. Thus, special attention should be given to a differential diagnosis for late presenting CDH. Whenever we meet a chest x-ray suggesting a very large pleural effusion, we should suspect the possibility of late presenting CDH.

Case Report

A 35 years old male, nonsmoker came to Chest and Tuberculosis Department, Vinayaka Mission's Medical College and Hospital, with the history of treatment for Left sided Tuberculosis pleural effusion with antituberculosis drugs. Patient has defaulted the treatment after taking drugs for 2 months since he had persistent gastritis symptoms due to the drugs. Chest x-ray repeated now showed the opacity in the left lower zone similar to the previous Chest x-ray (Figure 1).

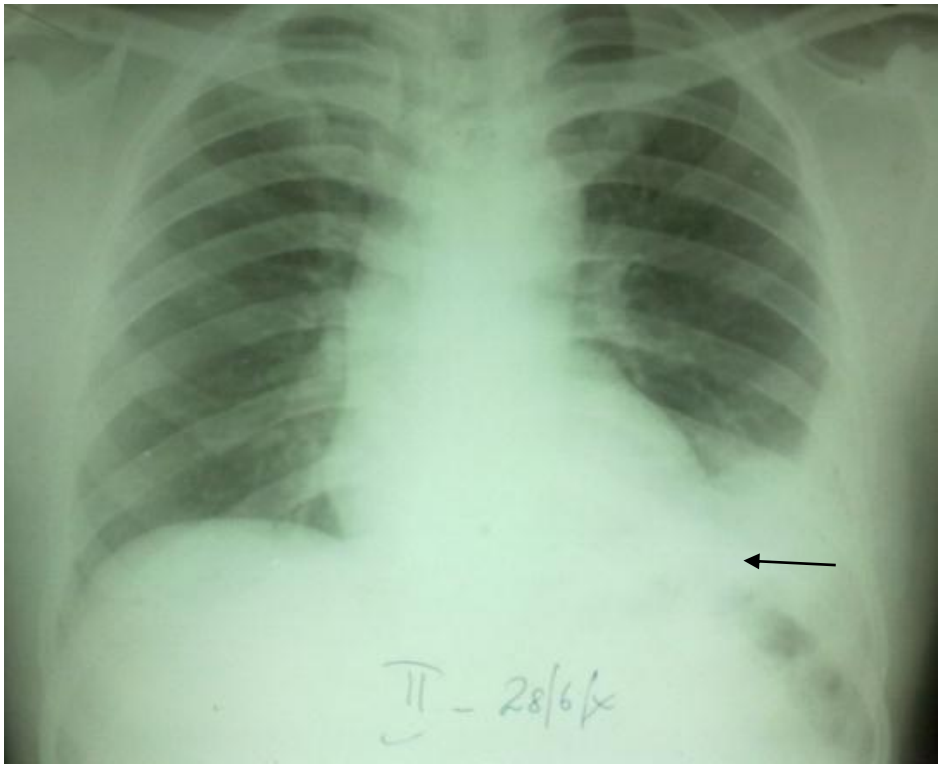

Figure 1. Pleural effusion (Chest Xray showing left lower Zone opacity mimicking Black arrow)

So Computed Tomography of the chest was done which showed a defect of 4cm in the left hemidiaphragm with protrusion of omentum through the defect into the chest suggestive of diaphragmatic Hernia (Figure 2A, 2B).

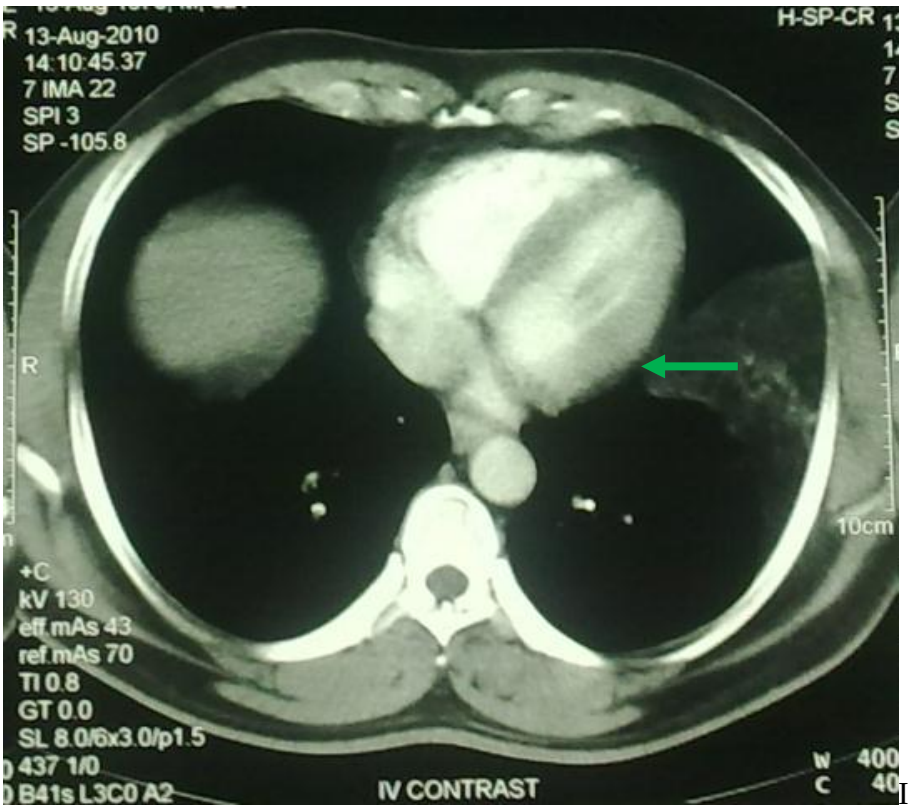

Figure 2A – Computed tomography Chest Mediastina window showing soft tissue density of the Diaphragm (Green arrow)

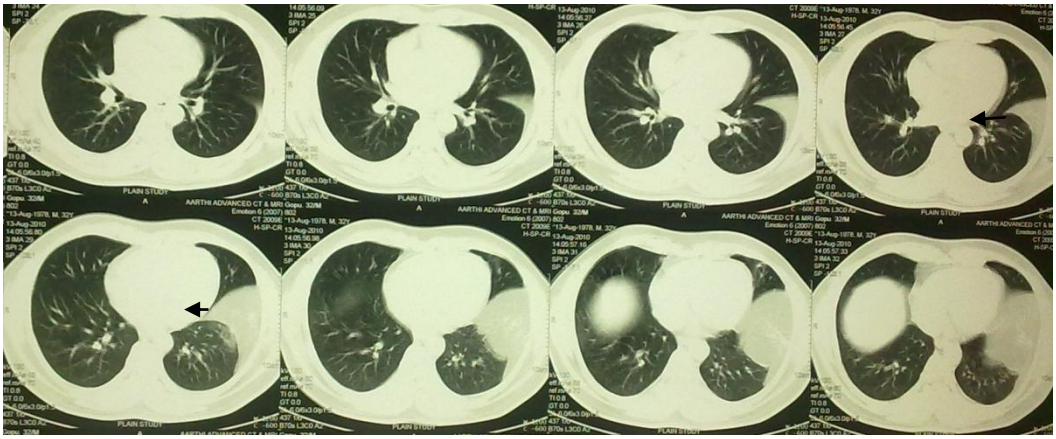

Figure 2B- Computed Tomography Chest Lung window showing the diaphragmatic defect with the intestinal content (Black arrows).

So it was Diaphragmatic Hernia which mimicked the pleural effusion which made the treating physician to suspect Tuberculosis as the cause, since Tuberculosis is very prevalent in our place. Computed Tomography chest was not done at the time of diagnosis, if done it could have revealed the congenital anomaly of diaphragmatic defect. When probed patient also revealed that he did not give consent for pleural tapping, so it was not done. Hence antituberculous treatment was started empirically.

2. DISCUSSION

Diaphragmatic hernias are of either congenital or acquired type. The incidence of congenital type is 0.45 cases per 1000 births because of failure of normal development of muscular part of the diaphragm, making the abdominal contents to displace to thorax. The incidence of left sided diaphrapmatic hernias are more common than the right in adults. In most of the cases, earlier presentation in life is common but few cases which are smaller present later in adulthood, when they were not detected during childhood mimicking other disease. Acquired diaphragmatic hernias may arise from penetrating or blunt trauma, or may be iatrogenic. Incidence of iatrogenic Diaphragmatic Hernias are more because of increase in number of laproscopic surgeries being done. They tend to occur more on the left side than the right because of the protection by the liver to the left hemidiaphragm

Cases have been reported diaphragmatic hernias mimicking pulmonary metastasis [2,3],in one case it was diagnosed during the surgery done for the resection of the lesion ,in which it carries a high risk to the patient by undergoing major thoracic surgery because of a mimicker lesion. Other cases of Diaphragmatic hernia mimicking hydro pneumothorax [4], pulmonary embolism[5] have also been reported. Reported cases of Diaphragmatic hernias were of either congenital or acquired forms. Our case is probably congenital one since there is no history of trauma or previous surgeries done and mimicked pleural effusion leading to a treatment.

3. CONCLUSION

This case gives us a learning point that congenital or acquired diaphragmatic defect with hernias could mimic many lesions making it difficult for the treating physician as well as for the patient either to take a treatment or to undergo a procedure. Hence in cases where the lesions are found around the diaphragm should be probed for history of trauma or previous

surgeries done in the abdomen and thorax or ask for previous images to guide us for a better decision.

Conflict of interest
Authors do not have any conflict of interest
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4. REFERENCES

[1] Johnson CD, Ellis H. Acquired hernias of the diaphragm. Postgr Med J 1988; 64: 317–321.
[2] Lodhia, J V et al. "Diaphragmatic hernia masquerading as a pulmonary metastasis." *Annals of the Royal College of Surgeons of England* vol. 97,2 (2015): e27-9. doi:10.1308/003588414X14055925060758
[3] Ishikawa, Yuya & Kobayashi, Masashi & Asakawa, Ayaka & Kumazawa, Sachiko & Ishibashi, Hironori & Okubo, Kenichi. (2017). Diaphragmatic hernia mimicking lung metastasis: A case report. The Journal of the Japanese Association for Chest Surgery. 31. 199-203. 10.2995/jacsurg.31.199.
[4] Magu S, Agarwal S, Jain N, *et al.*Diaphragmatic hernia mimicking hydropneumothorax: common error in emergency department .*Case Reports* 2013;**2013:**bcr2012008547.
[5] Faisal Al-Zayer, Abdulla H Aljaroof, Maram Al-Marhoun, Basem Abualsaud, Mohammed Al-Zaher, Abdul-Wahed Meshikhes, Congenital right diaphragmatic hernia in an adult, *Journal of Surgical Case Reports*, Volume 2019, Issue 12, December 2019, rjz371, https://doi.org/10.1093/jscr/rjz371