

## Unusual Case of Pulmonary Koach with Spontaneous Hydropneumothorax in an 18-year-old Girl

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### Abstract

Pulmonary koach is a chronic granulomatous disease and major health problem in many developing countries. About 1/3<sup>rd</sup> of world's population is infected with *Mycobacterium tuberculosis*. Hydropneumothorax is an abnormal presence of air and fluid in the pleural space. In this article, I describe a case of Pulmonary koach with Spontaneous Hydropneumothorax in an 18-year-old girl.

**Keywords:** Pulmonary Koach; Hydropneumothorax

### Introduction

Pulmonary koach is a chronic granulomatous disease and major health problem in many developing countries. About 1/3<sup>rd</sup> of world's population is infected with *Mycobacterium tuberculosis*. Hydropneumothorax is an abnormal presence of air and fluid in the pleural space. Hydropneumothorax is one of the common respiratory emergencies encountered in the emergency department in India. In India, the main cause of Hydropneumothorax is ignorance to TB symptoms. Due to lack of knowledge people are unable to recognize TB symptoms. People avoid visiting doctor even after suffering from cough for more than 2 months. They think it's a normal cough and will get cure automatically. Some patients do not complete the TB treatment as directed by doctor. They miss doses or stop taking medicines by own. Due to these reasons bacteria of TB again starts damaging lung tissues which leads to thinning of lung wall. This thin wall gets ruptured and gives raise to entrapping of air between lung and chest wall called as Pneumothorax [1,2] which further leads to Hydropneumothorax [3].

### Case Report

An 18-year-old girl from Panvel was brought to hospital by her parents with complaints of breathlessness on exertion and cough

with expectoration. Patient was unable to stand. There was no history of chest pain. They already had a chest x-ray and CT scan showing Moderate to gross left Hydropneumothorax [3] with passive atelectasis of the underlying lung parenchyma. Patchy area of consolidation with air bronchogram within and multiple centrilobular branching opacities in V-Y pattern involving right middle lobe, right upper lobe and posterior basal, sup segments of eh right lower lobe. Right pleural space appeared clear.

Clinical diagnosis of Pulmonary koach with Massive Hydropneumothorax [3] was made and the patient was admitted in ICU. Inter-costal drainage (ICD) [4] was inserted for drainage. Deep breathing exercise was given. Patient responded well. Medicines such as Streptomycin 500mg daily IM, Tab Akurit, Tab Levoflox, Tab Linid 40mg and Clarithromycin 250mg were started. After 30 days ICD was clamped and removed [5]. Regular follow-ups and checkups were done up to 6 months.

After 6 months x-ray again showed Hydropneumothorax [3]. USG guided CXR was done [6] (Figure 1). USG chest report showed Moderate left sided pleural effusion with atelectasis of underlying lung parenchyma. Right CP angle was clear. USG guided Pleural tap-

ping [7] was done for 10-15 minutes. Post tapping CXR was done. (Figure 2). Fluid sample sent to laboratory for culture. Then patient get recovered fast and started doing all regular activities. After 18 months all the medicines were stopped. Patient found asymptomatic and was doing all activities just like a normal person.

**Figure 1:** CXR before Tapping.

**Figure 2:** Post Tapping CXR.

## Discussion

Hydropneumothorax [3] is severe form of Pulmonary koach. Symptoms are breathlessness due to mismatched ventilation and cough due to pleural involvement. It can be completely get cured by taking appropriate medicines. Pleural fluid can be drained by Intercostal drainage (ICD) [4] insertion or by USG guided Pleural tapping [7]. ICD [4] insertion for drainage requires more than 30 days whereas USG guided Pleural tapping [7] requires just 10-15

minutes. Patient recovery rate is faster in USG guided Pleural tapping [7] as compared to ICD [4] drainage.

## Conclusion

Pulmonary koach with Spontaneous Hydropneumothorax [3] can get completely cured. USG guided Pleural tapping [7] can be preferred for drainage as it requires less time and allows fast patient recovery.

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