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Simultaneous Bilateral Spontaneous Pneumothorax in a young Adult: A Case Report.

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I. Introduction

Simultaneous bilateral spontaneous pneumothorax is a very rare condition, accounting for ~1% of all spontaneous pneumothoraces [1]. Most of the reported cases are associated with underlying lung diseases. We herein report a rare case of a simultaneous bilateral spontaneous pneumothorax in a young adult with past history of Pulmonary Tuberculosis.

II. Case Report

A 30 year-old man was admitted to the Emergency Room complaining of chest pain and breathlessness of acute onset. The patient was afebrile, mildly tachycardic, and normotensive. Breath sounds were decreased bilaterally and SpO2 was 88%. Oxygen administration was immediately started and a chest X-ray PAV was obtained, revealing a simultaneous bilateral pneumothorax (with very minimal bilateral effusion)which was larger on the right side.(Figure 1 A &B) In addition, a big bulla was noted on the left side.On past history,the patient had Anti Tubercular Treatment for Pulmonary TB for 6 months duration.The patient was treated with chest tube insertion on the right side and the patient got immediate relief (Figure 2 A).Since a bulla was noted on the left side, chest CT was obtained.The CT showed a successful re-expansion of right side and a big bulla on left side with massive left sided Pneumothorax (Figure 2 B). So chest tube was also inserted on the left side and bilateral chest expansion was noted in Chest X ray after the procedure (Figure 3).After one week, the chest tube on the right side was removed as there was no air leak ,no drainage and re-expansion of the chest.The ICD tube on the left was kept in situ and CTVS consultation was taken and transfer for VATS and possible pleurodesis/pleurectomy/bullectomy at NEIGHRIMS,Shillong ,Meghalaya.

Figure 1.Chest X ray showing Bilateral Pneumothorax.Figure ! CT Thorax showing bilateral Pneumothorax. Right > Left.A bulla is seen in left side.

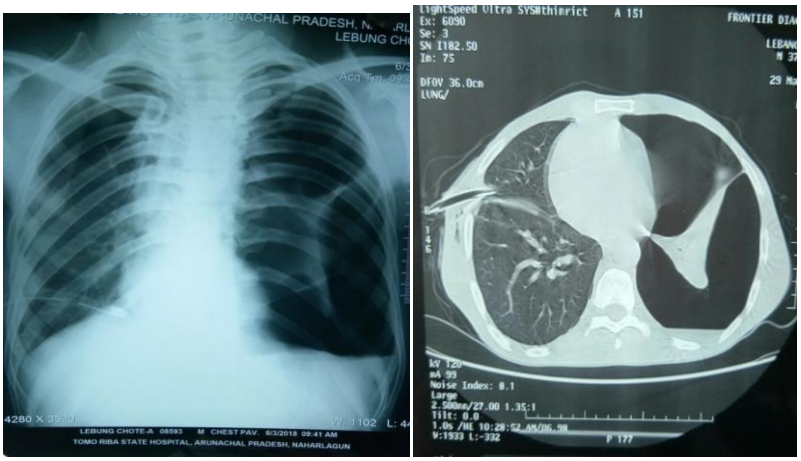

Figure 2 A.B Chest X ray PAV showing re expansion of of right side and CT Thorax showing massive left side pneumothrax with ICD tube on right side.

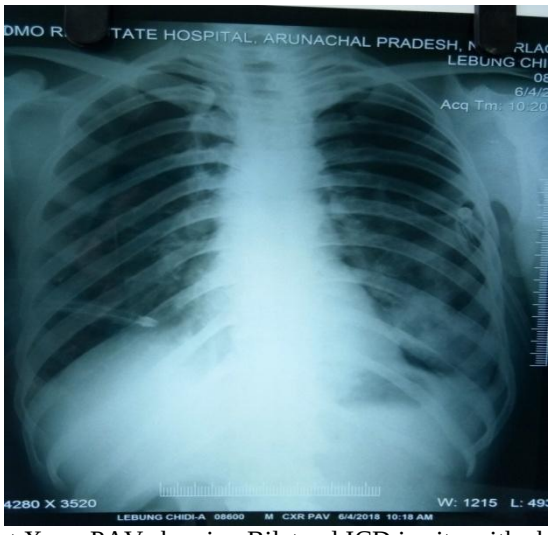

Figure 3.Chest X ray PAV showing Bilateral ICD in situ with chest expansion

III. Discussion

Although in clinical practice, spontaneous pneumothorax is a frequently encountered disease, Spontaneous Bilateral Secondary Pneumothorax (SBSP) is rarely reported in the literature. In SBSP cases, there is usually an underlying lung disease. Most SBSP cases are seen as a result of an underlying pulmonary disease, such as chronic obstructive pulmonary disease, malignant neoplasm, Pulmonary tuberculosis. Infrequently, SBSP may be caused by the pleural window communicating with the bilateral pleural spaces [2]. In the literature, SBSP reports are found along with malignancies [3].

SBSP cases vary in clinical presentation. Patients may present alternating clinical signs and symptoms, ranging from mild dyspnea to cardiopulmonary failure [1]. Patients are usually admitted to the hospital with sudden onset of dyspnea and pleuritic chest pain on the side of the pneumothorax. Physical examinations can appear normal in minimal pneumothorax cases. Symptoms can be bilaterally equal. In patients with excessive pneumothorax, hyperresonanceis detected with percussion, and breath sounds are diminished or lost. The patients has sudden onset of dyspnea and chest pain. Diagnoses are based on radiological findings. Chest radiographs form the basis of the radiological examination. Computerized tomography of the thorax is indicated to detect underlying causes of spontaneous pneumothorax [3, 1]. Even though pneumothorax is a

relatively easily suspected disease based on a patient's history and physical examination, a delay in hospital admission and radiological evaluation could cause a life-threatening condition due to the rapid decrease in breath sounds, respiratory difficulty and decrease in oxygen saturation.

In the treatment of pneumothorax, the main aims are to achieve complete lung expansion and prevent a recurrence. There are different treatment modalities, ranging from observation to thoracotomy. These treatment modalities include needle aspiration, percutaneous catheter drainage, tube thoracostomy with chemical pleurodesis and video-assisted thoracoscopic surgery (VATS). Today, VATS is accepted as a standard approach for the surgical treatment of spontaneous pneumothorax in most centre One of the important advantages of

VATS is the ability to evaluate the entire thoracic area by video. Surgical treatment is recommended to reduce the risk of recurrence in SBSP treatment [2, 3]. Bullectomy is the most effective method for preventing recurrences. In addition, apical pleurodesis further reduces the risk of recurrence.

Chest drainage constitutes the basis of initial treatment, After relieving the patient clinically using a chest tube, a primary or secondary pneumothoraxdistinction can be made. Planning additional surgicalprocedures or pleurodesis according to the patient's clinical presentationand underlying disease is more appropriate.

In conclusion, SBSP is a rare clinical condition that frequentlyoccurs as a result of underlying lung disease. Because the recurrenceof SBSP is life threatening, a treatment approach should be appliedwith the aim of preventing recurrence. Due to its life-threatening nature, early diagnosis and appropriate treatment in SBSP case can save patient's life.

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