

View Box Case - 5

I. Masroor, R. Hashmi (Department of Radiology, Aga Khan University Hospital, Karachi.)

A 22 years old male presented with complaints of high grade fever for one month and breathlessness for one week. On examination his temperature was 102°F. He was tachypnic and there was reduced air entry in left hemithorax. Leukocyte count and E.S.R. were elevated. An Xray chest showed a 13.5x8.5cm oval shape cavity in left hemithorax with an air-fluid level (Figure).

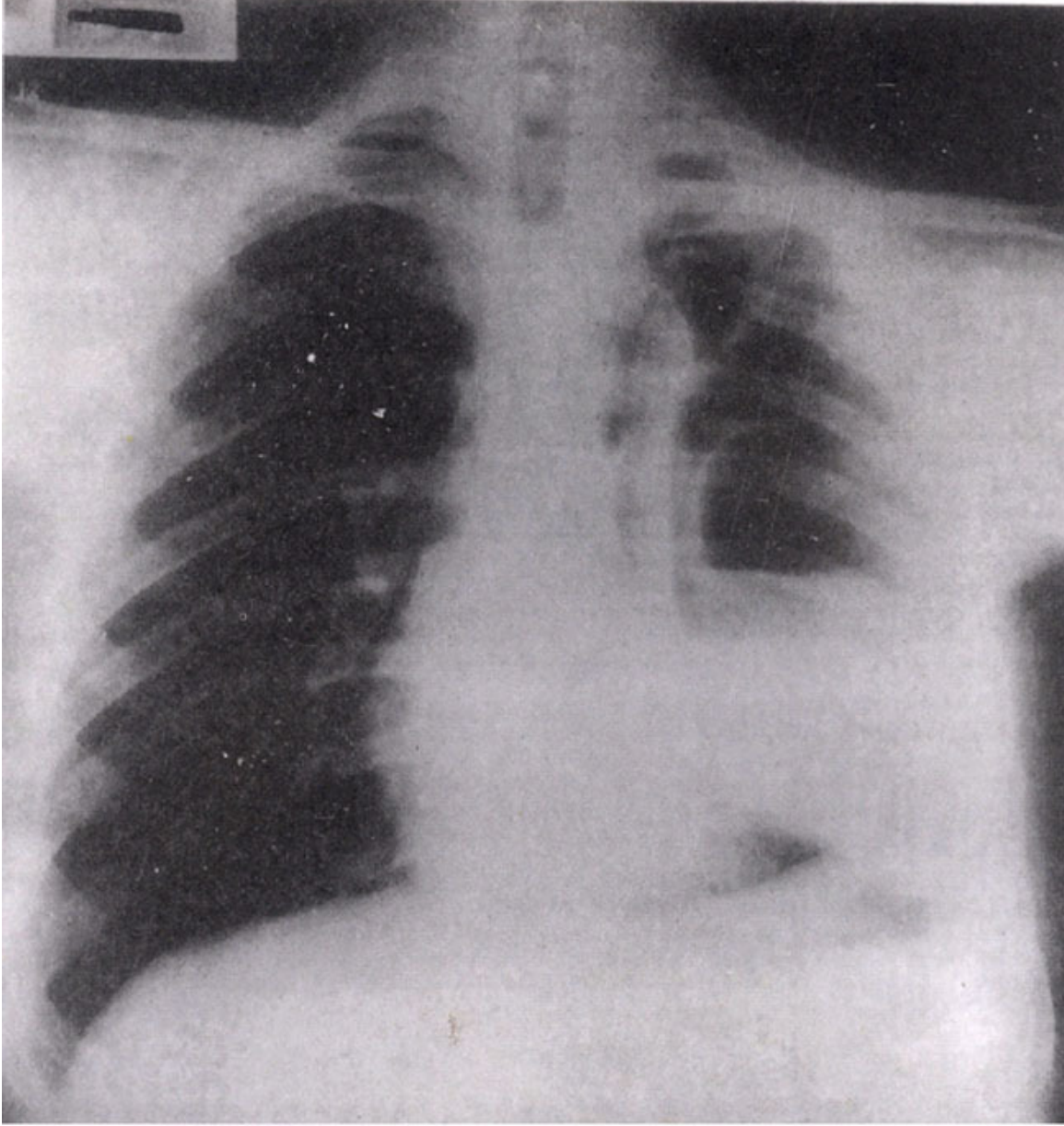


Figure. Chest postero-anterior view.

On computed tomography the cavity had thick wall, the inner wall was irregular. Under

ultrasound guidance, a chest tube was put in and thick pus was drained. Patient was given intravenous antibiotics followed by oral antibiotics. The chest tube was removed following complete drainage of abscess. Patient recovered completely.

Diagnosis: Pyogenic lung abscess.

Discussion

Lung abscess is an acute or chronic infection of the lung marked by a localized collection of pus, inflammation and destruction of tissue. The immediate cause of lung abscesses is infection caused by bacteria. A primary lung abscess is due to aspiration of fluid into the lungs, which is the most common cause. Lung abscesses may be secondary to certain pneumonias (gram negatives, staphylococcus aureus, Hemophilus influenzae, or fungal) or from septic emboli from other systemic sources. Clinical presentation is indistinguishable from any other pneumonitis. If communication with a bronchus occurs, the patient develops copious bloody and foul smelling sputum. Other findings include fever, dyspnea, weight loss, anorexia. Neither clinical nor radiographic features permit a specific diagnosis to be made. Microbiologic or histopathologic material is needed to establish the diagnosis¹. Traditionally, plain film chest radiography has been the mainstay in the roentgenographic evaluation of infectious disease in the chest. Plain film shows a thick walled clear space or cavity surrounded by solid tissue. There is often a visible air-fluid level. It usually does not involve chest wall. Plain film often helps in distinguishing lung abscess from empyema, cancer, tuberculosis, or cysts. Plain film tomography will augment chest radiograph in detection of cavitation and evaluation of bronchial tree. Ultrasound can be done to evaluate the pleural space. It shows the abscess associated plural effusions as well as adjacent consolidations. It is done via sub-costal or intercostal approach. Computed tomography examines the lung parenchyma, mediastinum, pleura and chest wall and further aids in diagnosis. On computed Tomography the outer wall is usually ill defined. Other associated findings include effusion and adenopathy². Patients are usually given a combination of antibiotic and oxygen therapy. Ultrasound or computed tomography guided percutaneous drainage is effective and the permanent treatment³. Surgery is needed in 5% of patients.

References

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- 2.Diefenthal HC, Tashjian J. The role of plain films, CT, ultrasound and percutaneous needle aspiration in diagnosis of inflammatory lung disease. Semin. Respir. Infect., 1988; 3: 83-105.
- 3.Lambiase RE, Deyoe I, Cronan JJ, et al. Percutaneous drainage of 335 consecutive abscesses: Result of primary drainage with 1 year follow up. Radiology, 1992 ; 184: 167-79.