



## Diagnostic puzzle with recurrent pneumonia in an adult

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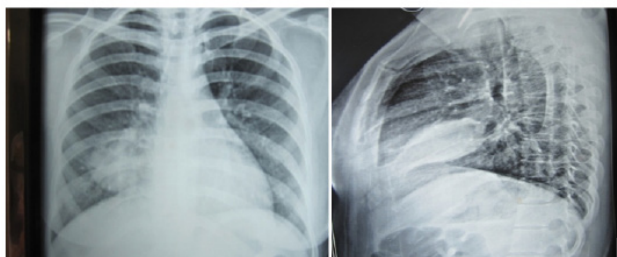
### Introduction

Recurrent pulmonary infections in adult may be due to infective cause like persistent pneumonia and pulmonary abscess or may be due to congenital anomaly like congenital pulmonary airway malformation (CPAM), bronchogenic cyst, pulmonary arteriovenous malformation, or Pulmonary sequestration[1]. Congenital pulmonary abnormalities with infection may mimic chronic infection like tuberculosis or may be pulmonary neoplasm. Here we present a young with recurrent pulmonary infection causing a diagnostic puzzle.

### Case report

A 21 yr female was presented at OPD of our hospital on 23/7/12 with history of Low grade fever, Cough with expectoration, Gradual weight loss, Anorexia for 1month with recent onset Hemoptysis and right sided Chest pain for 4 to 5 days. She was treated locally with oral antibiotics but little improvement. There was same type of episodes every year from childhood with fever, chest pain, and productive cough along with shortness of breath last for about 1month every episode. She is non diabetic. She never took anti tubercular drug for her illness. Her BMI was 18kg/m<sup>2</sup>. She is mild anemic but no lymph node is palpable. On clinical evaluation her upper respiratory tract was normal, trachea was in central position, respiratory movement normal, and percussion note normal. Few coarse crepitation was noted at right infra-scapular area. Vocal fremitus and resonance were normal. Her recent chest X-Ray looks like this.

PA and Right lateral view (11/7/12).

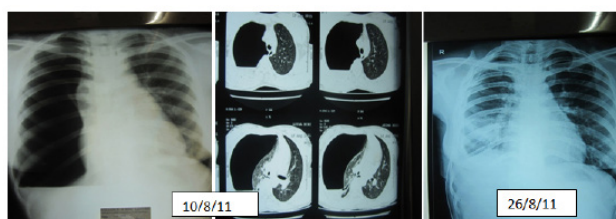


Clinical presentation with Radiological impression suggested several differential diagnosis like pulmonary tuberculosis, community acquired pneumonia, pleural effusion at oblique fissure, hydatid cyst, pulmonary malignancy, fungal infection, hamertoma and sequestration of lung. Reports on 25/7/12 showed Hemoglobin 9.1

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gm%, TC 12600/cu mm , ESR 76mm 1st hr, CRP12mg/dl, Montoux test 17mm×27mm(positive), Echo normal (LVEF 65%), Sputum for AFB (3 samples) negatives, no hyphae detected in sputum.

On retrospective history it was revealed that she was admitted to local hospital on august 2011 due to severe shortness of breath, cough and chest pain. Radiological and hematological evidence of that period revealed hydropneumothorax of right chest probably due to bacterial infection. ( Hb 10.3gm%, TC 11200/cu mm(N56,L41,E2,M1), ECG+ Echocardiography(27/8/11)-WNL, Pleural fluid- cell count 470/cu mm(mostly lymphocytes), ADA 32, LDH281, sputum for AFB negative.) . Repeat X ray chest on 16th august suggest persistent shadow with complete resolving of hydropneumothorax.



With such significant past history and present clinical scenario, an HRCT thorax was done. On CECT thorax it was revealed area of consolidation at apical segment of lower lobe of right lung. A CT guided FNAC was performed. Showing clinical pattern and previous history we have started anti tubercular drugs and wait for biopsy report. CT thorax on 03/08/12



FNAC shows Few structure like cartilage, alveolar cells, neutrophils, macrosites and red blood cells, degenerated tissue ,no giant cell, no epitheloid cell , no AFB, no fungal cyst or hyphae.

Final impression after clinical, radiological and cytological evaluation was intralobular Sequestration of lung with recurrent pyogenic infection.

ATD was stopped, antibiotics started and patient gradually improved. Patient is on followup for next 6 years with history of infection thrice in this period. In last episode of infection chest Xray was like this.

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This patient is an ideal case of surgical resection of sequestered segment of lung which is not possible due to socio- economical reason.

### Discussion

Pulmonary sequestration (PS) is a rare congenital malformation.

Pulmonary sequestration appears to result from abnormal budding of the primitive foregut. Non-functioning lung tissue in PS is separated from the rest of the lung. It is supplied with blood from an unusual source, often from aorta. [2] Pulmonary sequestrations classified as intralobular or extralobular, depending on their location.[3] Intralobular pulmonary sequestration is not commonly associated with other congenital anomalies. [4] Intralobular pulmonary sequestration is often diagnosed later than extralobular pulmonary sequestration, in childhood or adulthood. Our patient is a young adult of just 21 years. We have not found any other congenital abnormalities on USG abdomen, or Echocardiography.

Intralobular pulmonary sequestration is characterized by recurrent infections, hemoptysis, or pleural effusion. [5] A chronic or recurrent cough is common.[4] Our present patient presented with recurrent cough, fever, and pleural effusion. Later she developed hydropneumothorax which is probably iatrogenic. This chronic nature of the disease create diagnostic puzzle with other common conditions like pulmonary tuberculosis, community acquired pneumonia, pleural effusion at oblique fissure, hydatid cyst, pulmonary malignancy, fungal infection, hamertoma . [2] A chest radiograph may reveal a solid or fluid (cystic) lesion in the lower lobe.

Due to the risk for infection and bleeding, intralobar pulmonary sequestrations are usually removed, either by segmentectomy or lobectomy[7]. Nearly one-half of adult patients with PS present with no relevant symptoms. The decision regarding surgical resection needs to weigh various factors including clinical manifestations related to PS, risk of surgical complications, co morbidities, and individual patient preferences. Though our patient is ideal for surgical management, due

to socio economical reason it was not done till last follow-up period.

### Conclusion

Recurrent lung infection in adult may be due to non resolving pneumonia, lung abscess or several congenital anomalies. Pulmonary sequestration, though rare, may be such type of congenital cause. Proper clinical evaluation with radiological, cytological workout helps prompt diagnosis and proper management.

### References

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