

General Data

- ❖ Age : 39 y/o
- ❖ Sex : Female
- ❖ Occupation : 高中老師
- ❖ Admission date : 94-5-22
- ❖ Discharge date : 94-5-31

Chief Complaint

- ❖ Fever and general weakness for 5 days

Present Illness

- ❖ Fever(38.5 °C) with mild cough (whitish sputum)
- ❖ Dyspnea
- ❖ 93/10 → Pulmonary sequestration (hemoptysis)

Review of Systems (I)

- General : body weight loss(-), fatigue(+), fever(+), chills(-)
- Head : headache(-), head injury(-)
- Eye : double vision(-), glaucoma(-), cataracts(-)
- Ear : pain(-), discharge(-), tinnitus(-), hearing loss(-)
- Nose : nasal stuffiness(-), discharge(-), nose bleeds(-), sinus trouble(-)
- Neck : lumps in the neck(-), swollen glands(-), goiter(-), pain for stiffness(-)

Review of Systems (II)

- Breast : lumps, (-) pain or discomfort(-), nipple discharge(-)
- CV system : chest pain(-), high blood pressure(-), rheumatic fever(-), heart murmurs(-), orthopnea(+), edema(-), tightness(—)
- Chest : cough(+), sputum(+), hemoptysis(-), wheezing(-), asthma(-), bronchitis(-)
- GI system : heart burn (-), nausea(-) , vomiting(-), loss of appetite(-), frequency of bowel movements (-), change in bowel habits (-), rectal bleeding or a tarry stools (-), diarrhea (-), abdominal pain (-)

Review of Systems (III)

- Extremities : pitting edema(-), Cyanosis(-)
- Skin: rashes(-), lumps(-), sores(-), itching(-), dryness(-), color change(-), change in hair or nails(-)
- Neurologic: consciousness change (-), fainting (-), blackouts (-), seizures (-), **weakness (+)**, paralysis (-). numbness (-), tingling (-), tremors or other involuntary movements.(-)
- Skin : rashes(-), lumps(-), sores(-), itching(-), dryness(-), color change(-), change in hair or nails(-)

Physical Examination (I)

- General appearance : weakness, fever
- Consciousness: E4M6V5
- Vital sign
 - Blood Pressure : 126/70 mmHg
 - Temperature : 37.3°C
 - Pulse rate : 80/min
 - Respiratory rate : 22/min
- Head : normocephalic ; no evidence of trauma ; no lesions noted
- Eyes : Cornea is without lesions , conjunctiva is clear , sclera is white. Normal light reflex, normal visual field
- Ears : no discharge, no hearing loss
- Nose : Normal in appearance

Physical Examination (II)

- Mouth and throat : Lips are without cyanosis or pallor
- Neck : no adenopathy, no thyroid and jugular vein enlargement
- Chest:
 - Symmetric expansion.
 - BS: rhonchi over Right lower lung.
 - Percussion: dullness

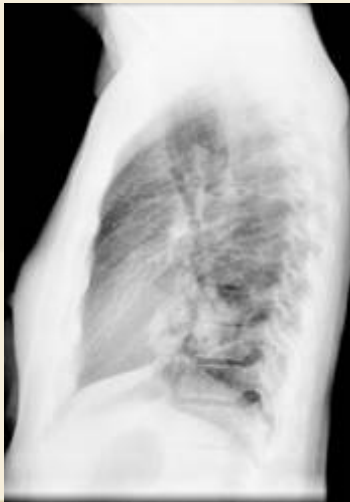
Physical Examination (III)

- Heart: P.M.I 3 cm. to left of mid clavicular line in 5th interspace, dullness between 2nd to 5th ICS, no murmur, no gallop rhythm
- Abdomen : symmetric, flat, no spider nevi , no superficial vein engorgement, soft and no tenderness, no splen and liver enlargement, no shifting dullness, no palpable mass, bowel sound normal active
- Extremities : no defomities and dislocation, no clubbing fingers; no pitting edema, no varicose veins, no clubbing toes

Lab Data

	5/22	5/26
❖ WBC [4.0-11.0 x10.e3/uL]	10.97	12.17
❖ %NEUT [40-74 %]	78.1	74.8
❖ GPT (血液) [0-40 IU/L]		67
❖ CRP (血液)[0.0-0.8 mg/dl]	15.50	

Image (I)



- ❖ 93-10-12
- ❖ Cavitation of lung parenchyma is noted at Rt lower lung zone.
- ❖ Right lower lobe has radiopaque lesion which obscure the right hemidiaphragm.

Image Studies (II)



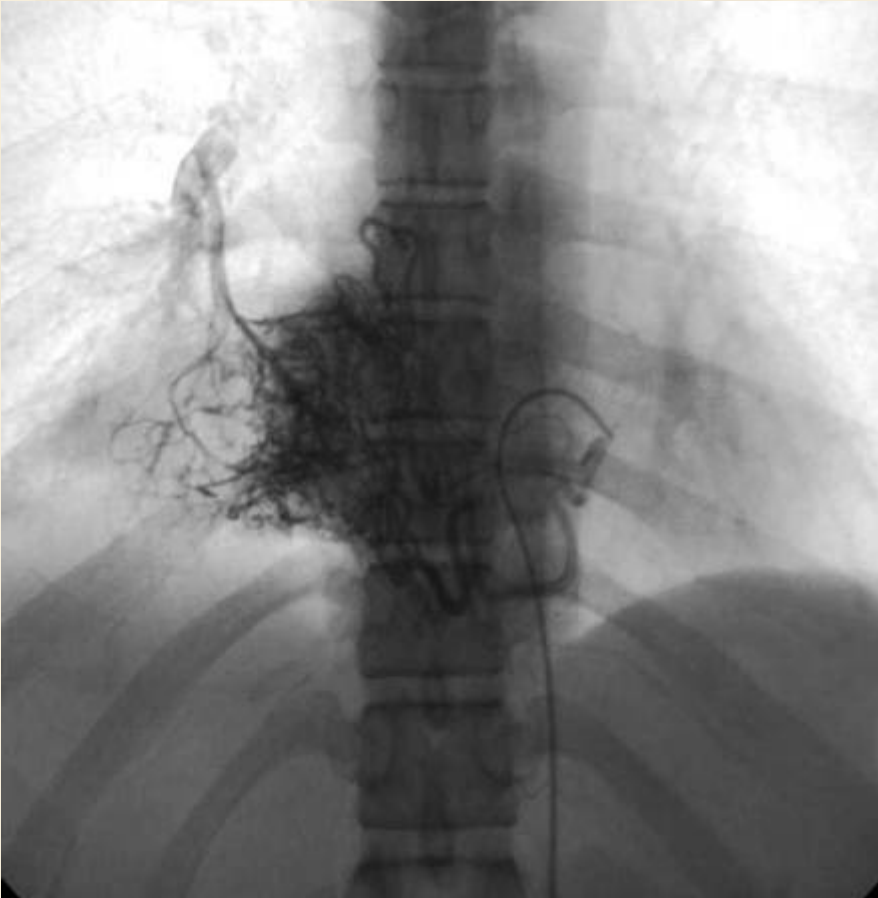
- ❖ 94-5-22
- ❖ Patchy area of alveolar opaque densities at Rt heart border and hemidiaphragm .
- ❖ Reticular pattern of lung marking is noted at Rt lung.

Image Studies (III)



- ❖ 94-5-26
- ❖ RLL has radiopaque lesion which obscures the right hemidiaphragm.
- ❖ Peribronchovascular thickening.

Image Studies (IV)



- ❖ 94-5-27
- ❖ An anomalous pulmonary artery was found from the systemic artery, which supplies the right lower lobe consolidation with venous return normally into the right pulmonary vein.

Differential diagnosis

- ❖ Bronchiectasis
- ❖ Arteriovenous malformation
- ❖ Tumor

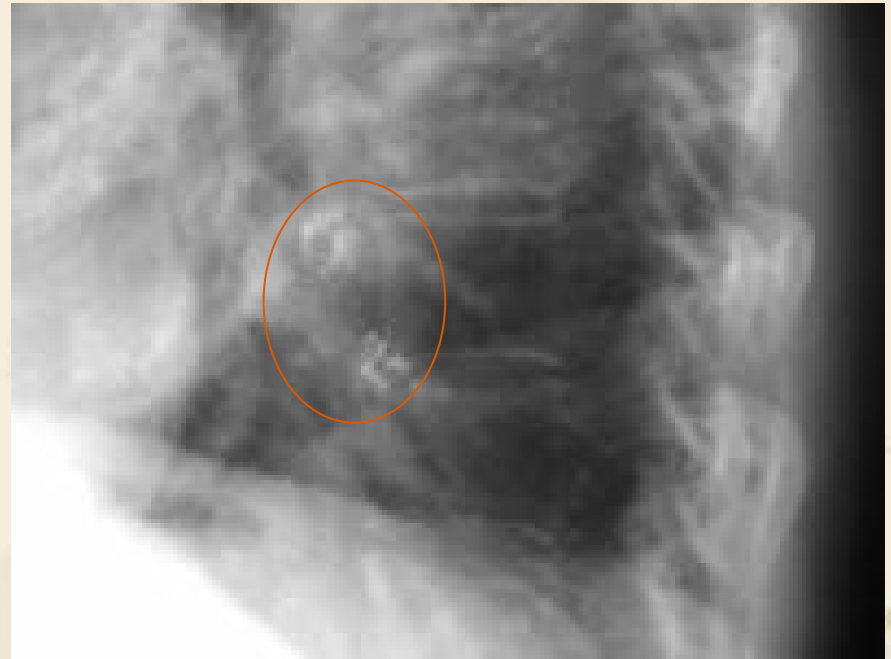
Bronchiectasis

- ❖ Irreversible dilatation of part of the bronchial tree.
- ❖ X-ray : tram tracks
(thickened dilated bronchi) ,
Ring opacities or cystic spaces (air-fluid levels) ,
peribronchial fibrosis .



Arteriovenous malformation

- ❖ Abnormal communication between the pulmonary artery and the pulmonary vein.
- ❖ S/S : epistaxis, Dyspnea, massive hemoptysis .
- ❖ round or oval mass of uniform opacity,



Lung tumor

- ❖ Divided into small cell tumor, adenocarcinoma, squamous cell carcinoma, and large cell carcinoma.
- ❖ S/S: cough, dyspnea, pleural effusion, hoarseness, body weight loss.
- ❖ CXR : rapid growing tumor mass → pleural effusion

The background features a traditional Chinese ink wash painting of plum blossoms. The branches are dark and gnarled, with small, delicate flowers in various stages of bloom. The painting is set against a light, textured background. At the top and bottom of the image, there is a decorative border consisting of a repeating geometric pattern of triangles and circles in a golden-brown color.

Discussion

Pulmonary Sequestration

Pulmonary Sequestration

- ❖ an embryonic mass of lung tissue
- ❖ blood supply from 1 or more anomalous systemic arteries without communication with tracheobronchial tree
- ❖ extralobar or intralobar
- ❖ 6.4% of all congenital pulmonary malformations, ILS :75-86%, ELS : 14-25%.
- ❖ S/S : cough, fever, recurrent pneumonia, hemoptysis

Extralobar sequestration (ELS)(I)

- ❖ Age : <1 y/o
- ❖ Blood supply : A→thoracic aorta or the abdominal aorta (>80%); pulmonary , subclavian, splenic, gastric, and intercostal arteries .V→azygos or hemiazygous veins or the IVC (>80%)
- ❖ Most commonly in men
- ❖ Associated with congenital anomalies

ELS (II)

- ❖ Congenital anomalies : diaphragmatic hernia (cystic adenomatoid malformations), also may communicate with the lower esophagus and stomach
- ❖ Usually are located within the left lower chest
- ❖ Extralobar sequestrations usually are asymptomatic

Intralobar sequestration (I)

- ❖ Age : 50% after adolescence, <50 y/o
- ❖ Blood supply : A→descending thoracic aorta (72%) ; abdominal aorta, celiac axis or splenic artery(21%) ; intercostal artery(3.7%)
V→pulmonary veins (95%)
- ❖ men = women
- ❖ Rarely associated with other anomalies

Intralobar sequestration (II)

- @ Medial or posterior basal segments of the left lower lobes
- @ Cough, fever, recurrent pneumonia, and hemoptysis

Diagnosis (I)

- ❖ CXR : Uninfected sequestration is seen as a well-defined mass, as a cyst. Extralobar lesions are solid more often and are associated with elevation of the ipsilateral diaphragm. Intralobar lesions appear more cystlike, and air is present if a pulmonary communication exists.
- ❖ CT : To define vascular anatomy, Accuracy diagnosis rate:90%(if a lesion is depicted in a typical site)

Diagnosis (II)

- ❖ MRI : Demonstrating a systemic blood supply and venous drainage.
- ❖ Nuclear medicine : ^{99m}Tc , xenon-131; Perfusion lung scans showed segmental perfusion defects in the site of the sequestered lung segments.
- ❖ Angiography : Definitive diagnosis.

Treatment

- ❖ Surgery
- ❖ Lobectomy is the procedure of choice for intralobar sequestrations.
- ❖ Prognosis : Resection has low mortality and morbidity rates