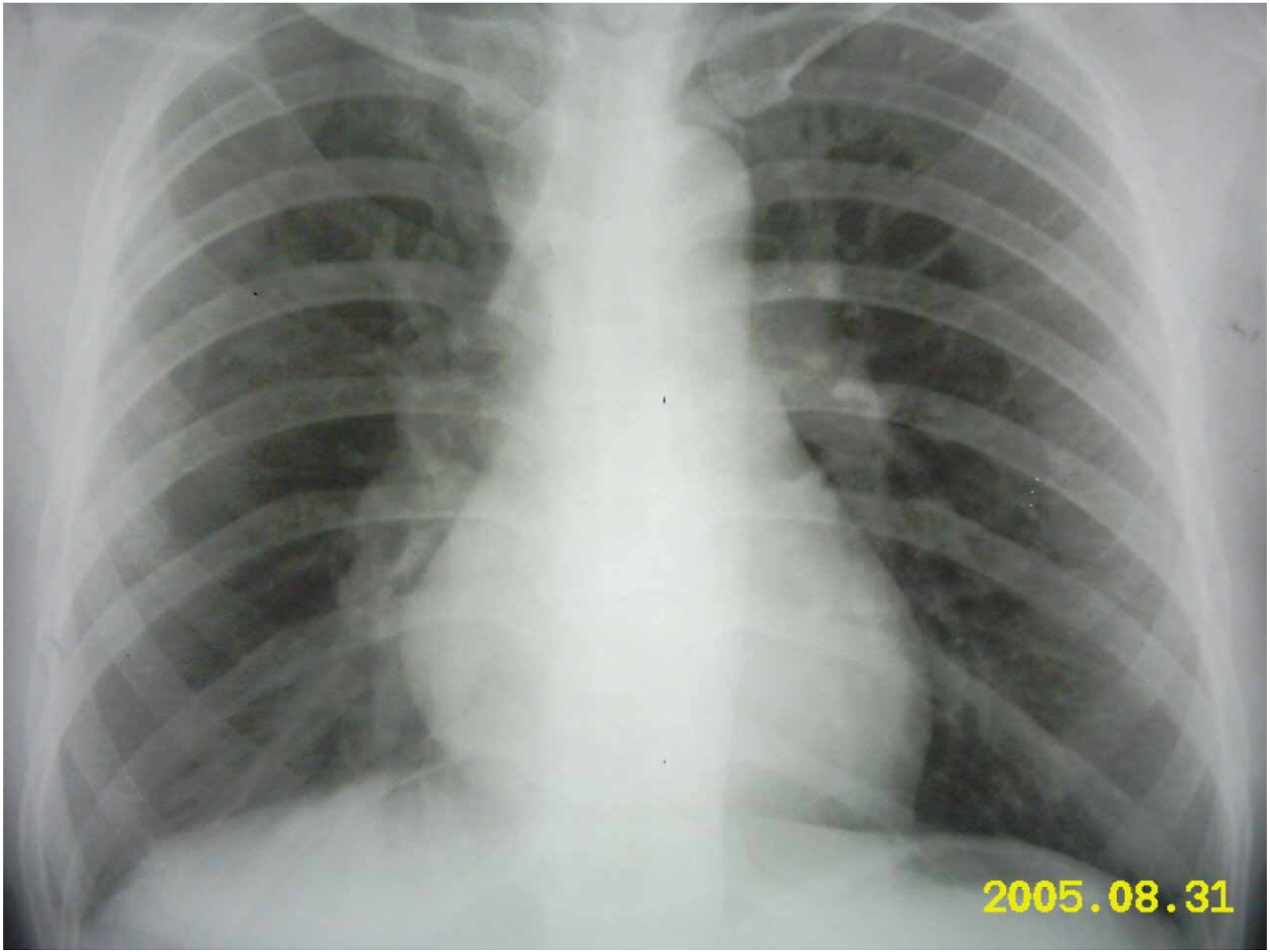
GWR
IUATLD 2007

Institute of Respiratory Medicine
Kuala Lumpur (IPR)

- 38 year old lady, non smoker
- Diagnosed asthma recently, well controlled on low dose ICS and prn ventolin.
- Presented with short history of wheezing and cough-treated as acute exacerbation with URTI as out patient.
- No other significant symptoms
- No fever documented
- CXR reported as normal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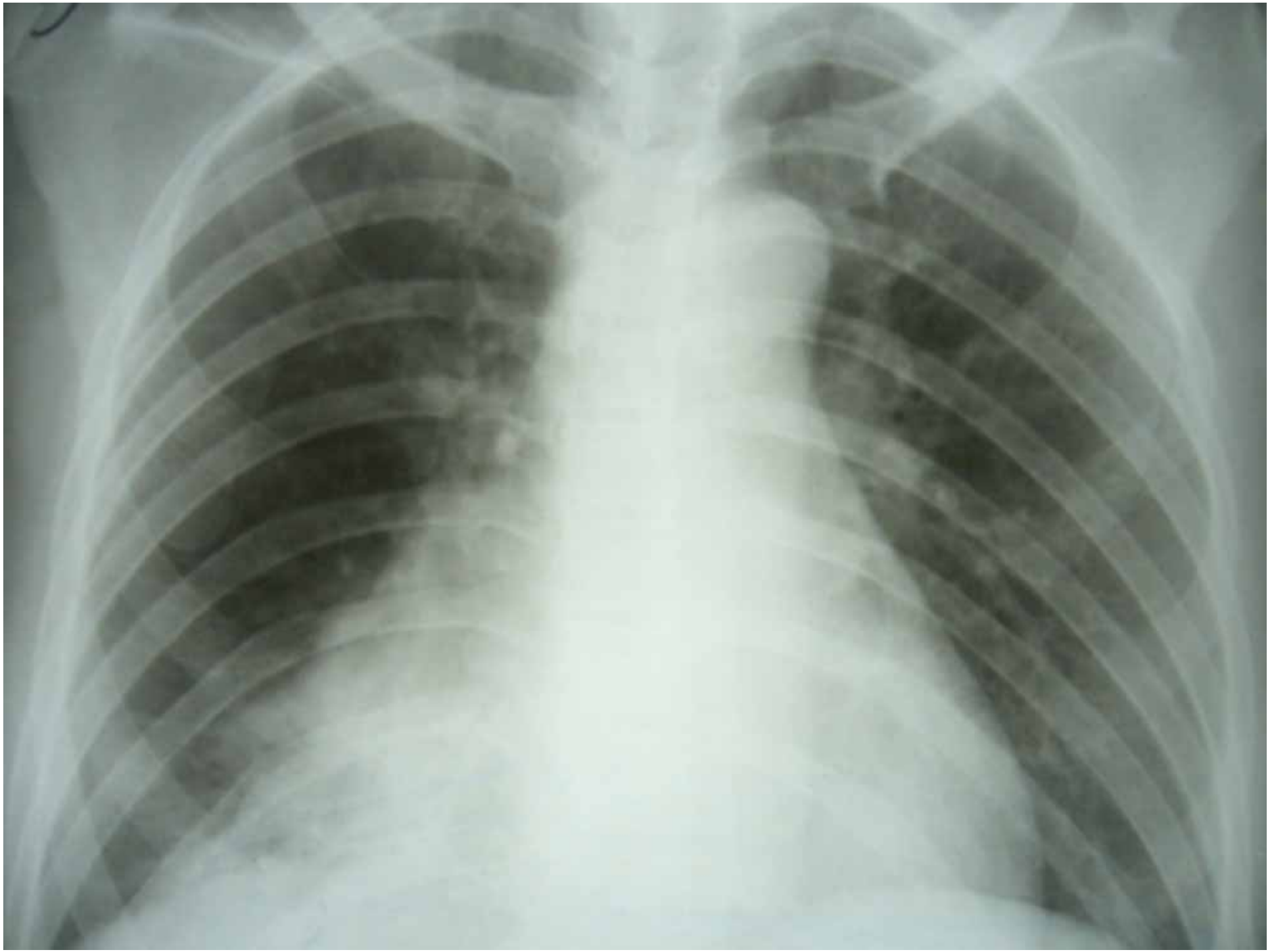
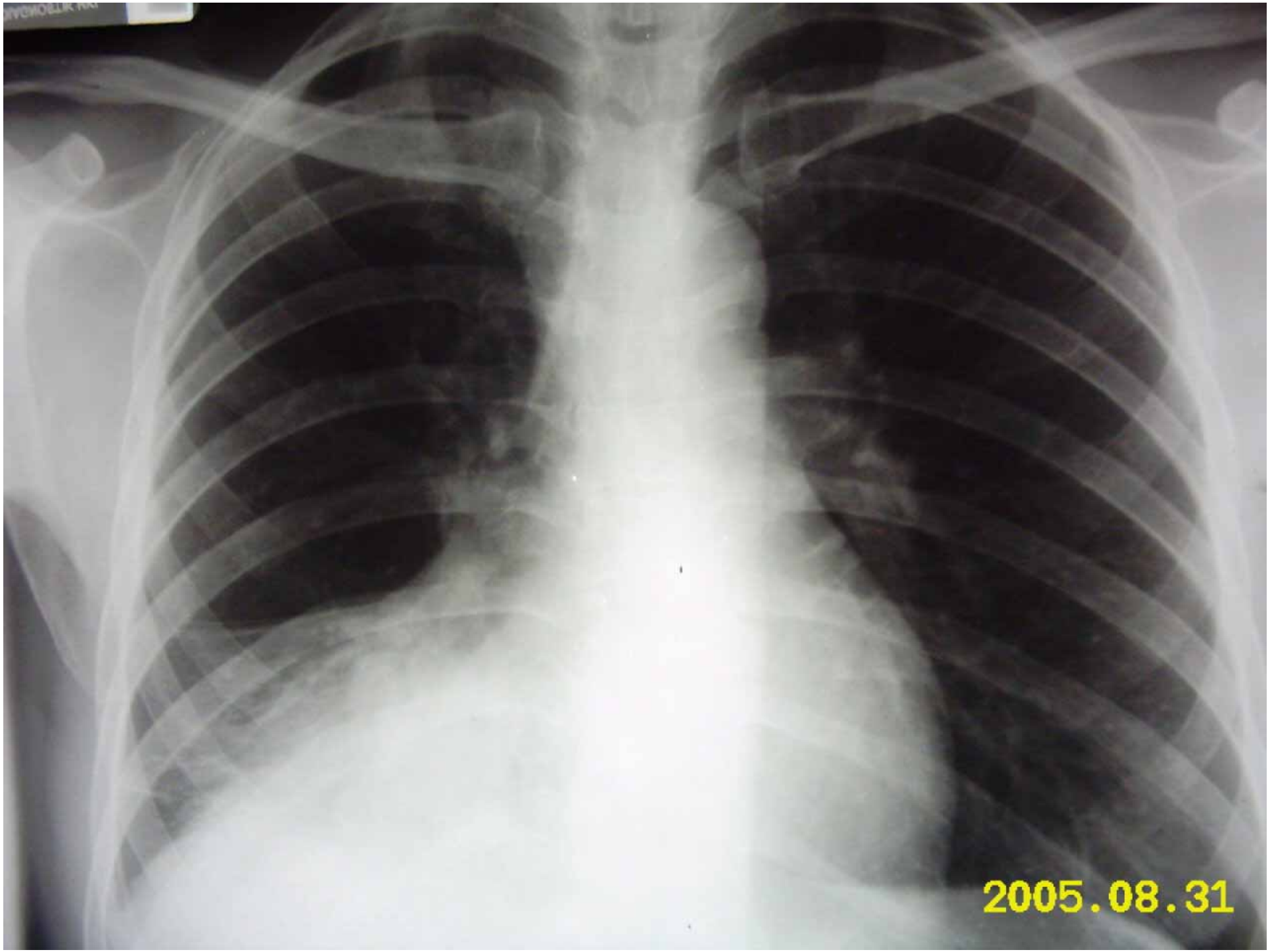
4 months later

- Persistent cough- mostly non productive, no haemoptysis.
- No wheezing or shortness of breath
- Feverish feeling, poor appetite, weight lost 2kg and malaise past 2 months.
- No bone pain
- Repeated visit to GPs and antibiotics
- Clinically unremarkable

CXR:

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Other investigations result

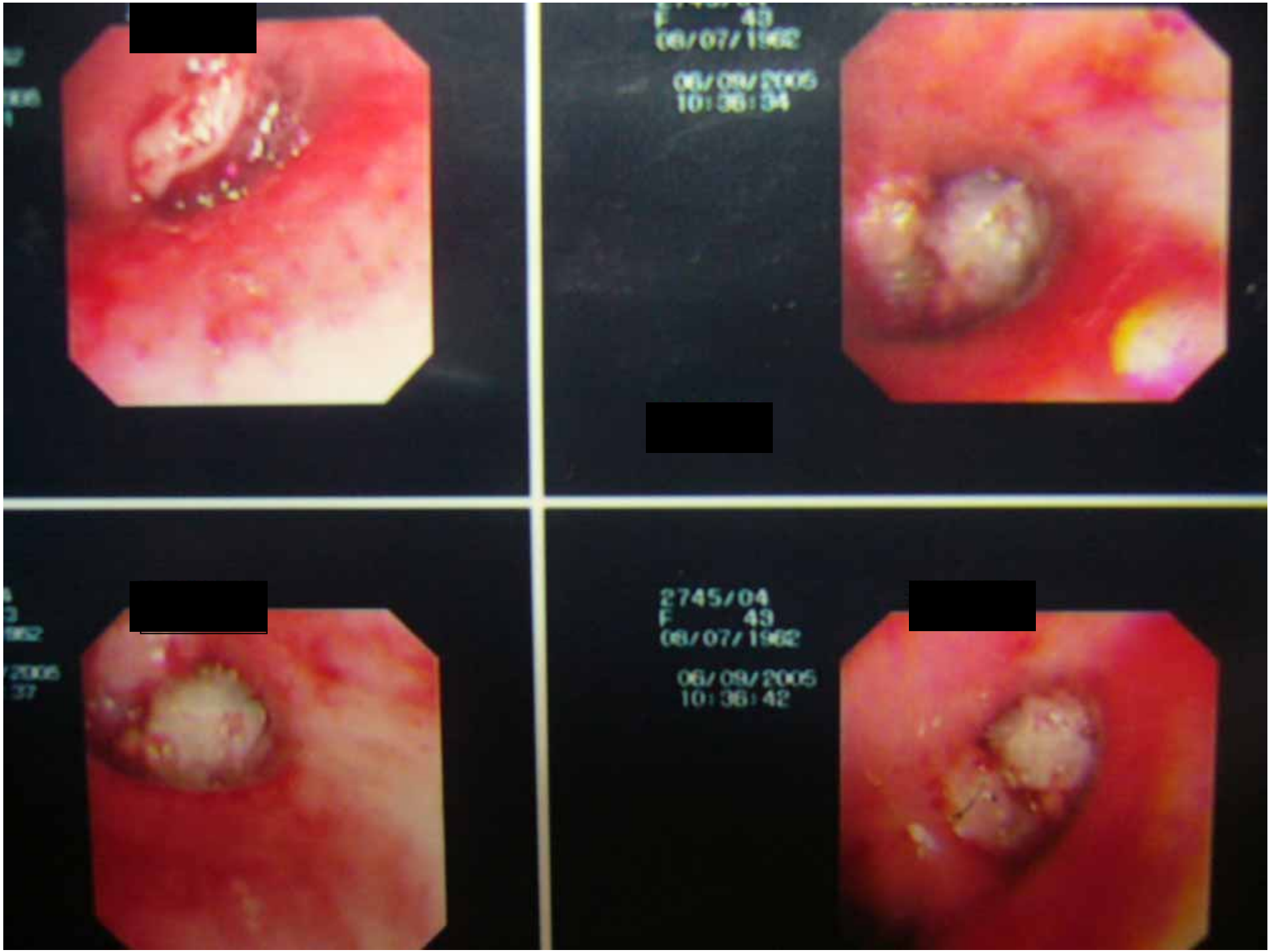
- FBC- Twc:10x10^3/Mmcl, Hb : 9.4 g/dl,
  Platelet 650x 10^3/mcl
- ESR 88 mm/hr
- FBP- microcytic, hypochromic anemia
  lymphocytosis, reactive thrombocytosis,
  no plasma cell, mild rouleaux formation
  no immature cell,normal reticulocyte counts

Serum iron- < 7 micmol/l. TIBC low

- Sputum AFB negative, TST 8 mm
- LFT- Globulin 78gm/l, albumin 38gm/l
  liver enzymes normal

Differential diagnoses

- Lung collapse consolidation due to
  - foreign body, mucus plug
  - endobronchial mass-Tb, Malignancy
  - Bronchocentric granuloma
- Haematological malignancy- Multiple myeloma/Plasmacytoma/lymphoma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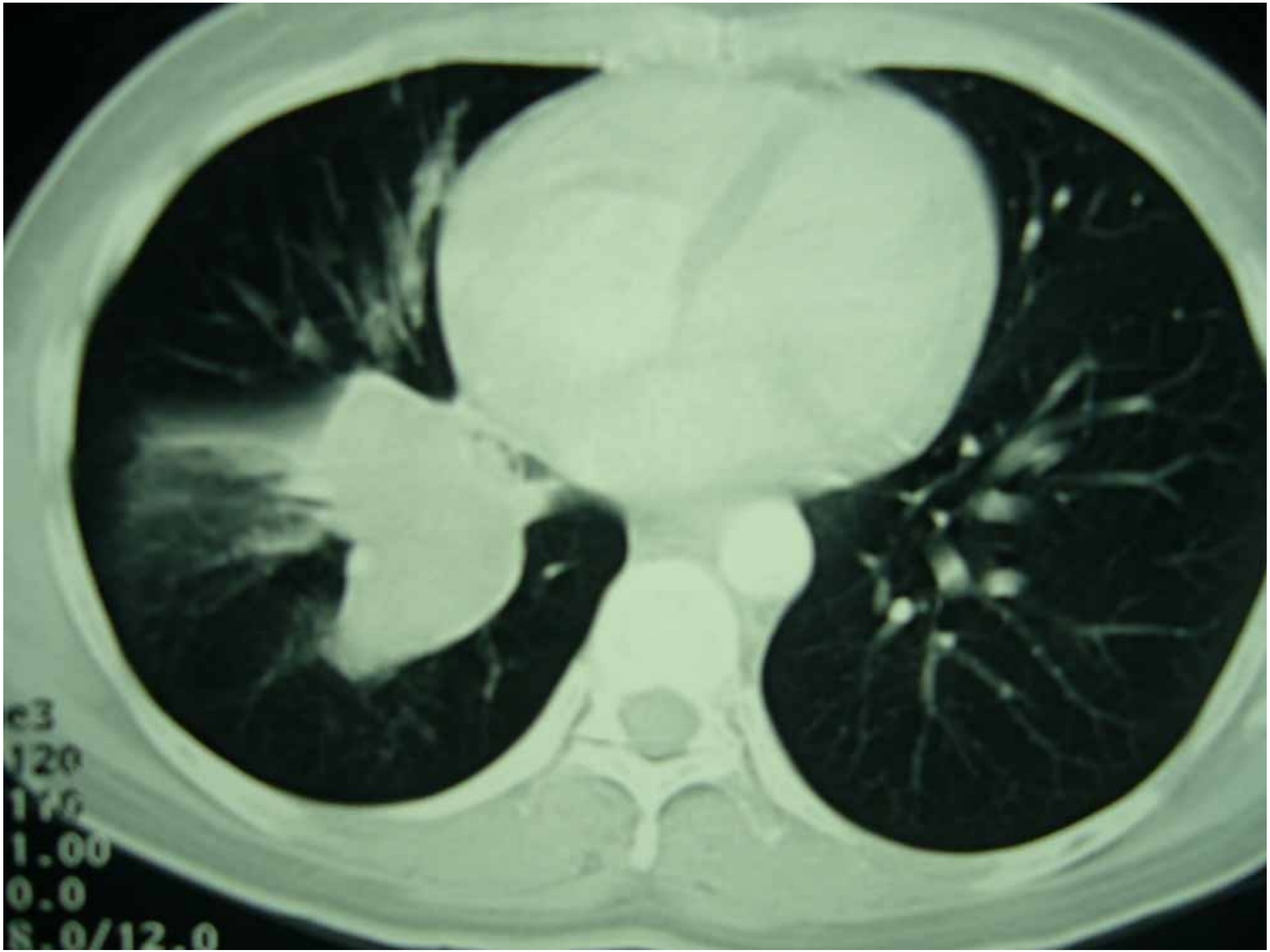
- Bone marrow examination
  - No abnormal cell
  - Plasma cells/lymphocytes infiltration
- ANA & RF were negative
- Urine Bence Jones protein- not detected
- Protein electrophoresis- polyclonal increase in gammaglobulins and increase acute phase protein

CT Thorax

Large solid mass arising from bronchus intermedius 8x 5x3 cm extending cranicaudally causing collapsed of middle lobe and partial Rt LL collapsed, no lymphadenopathy or pleural effusion seen.

The rest of lung fields are normal.

Suggestive of malignancy/lung ca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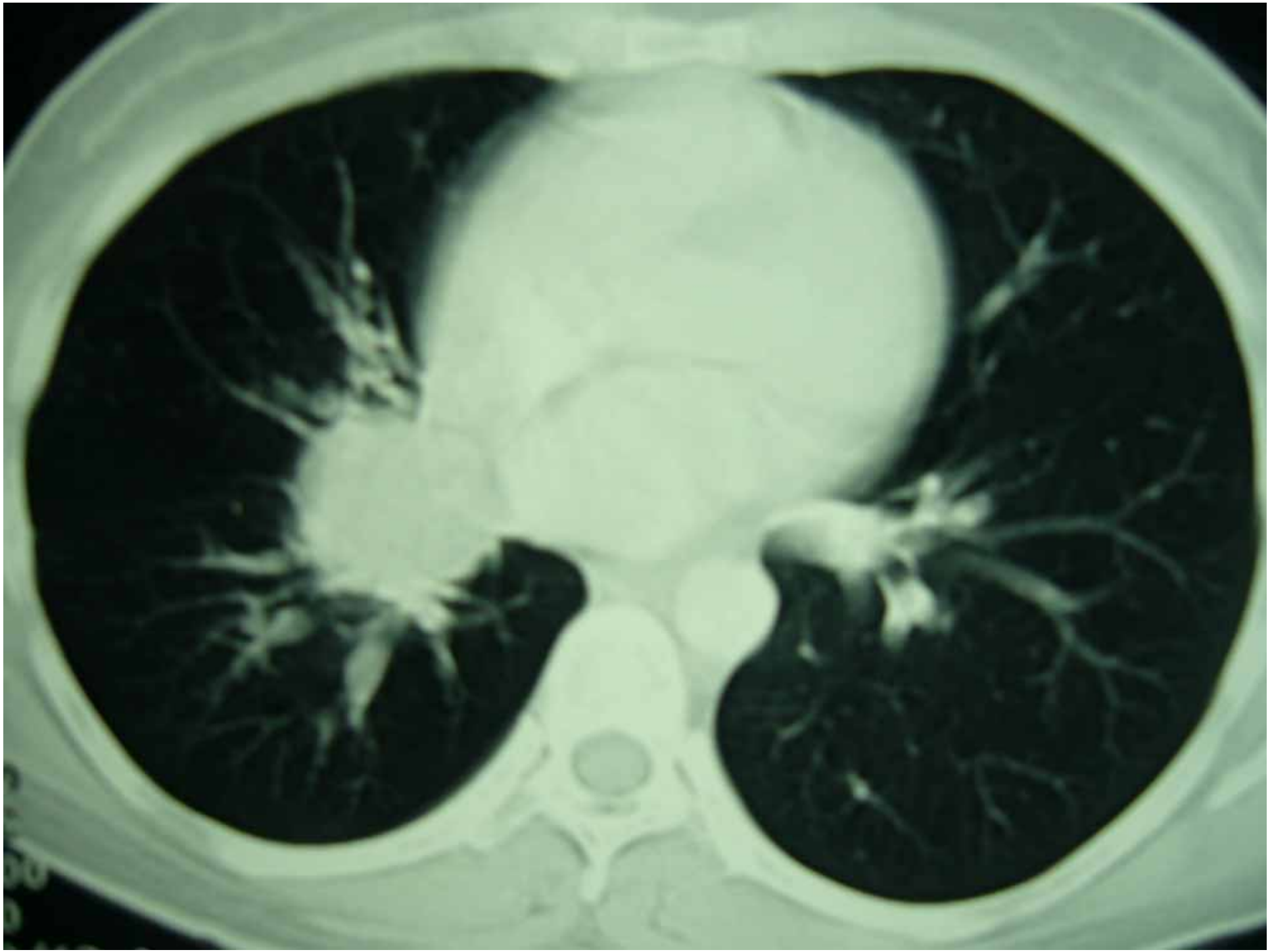

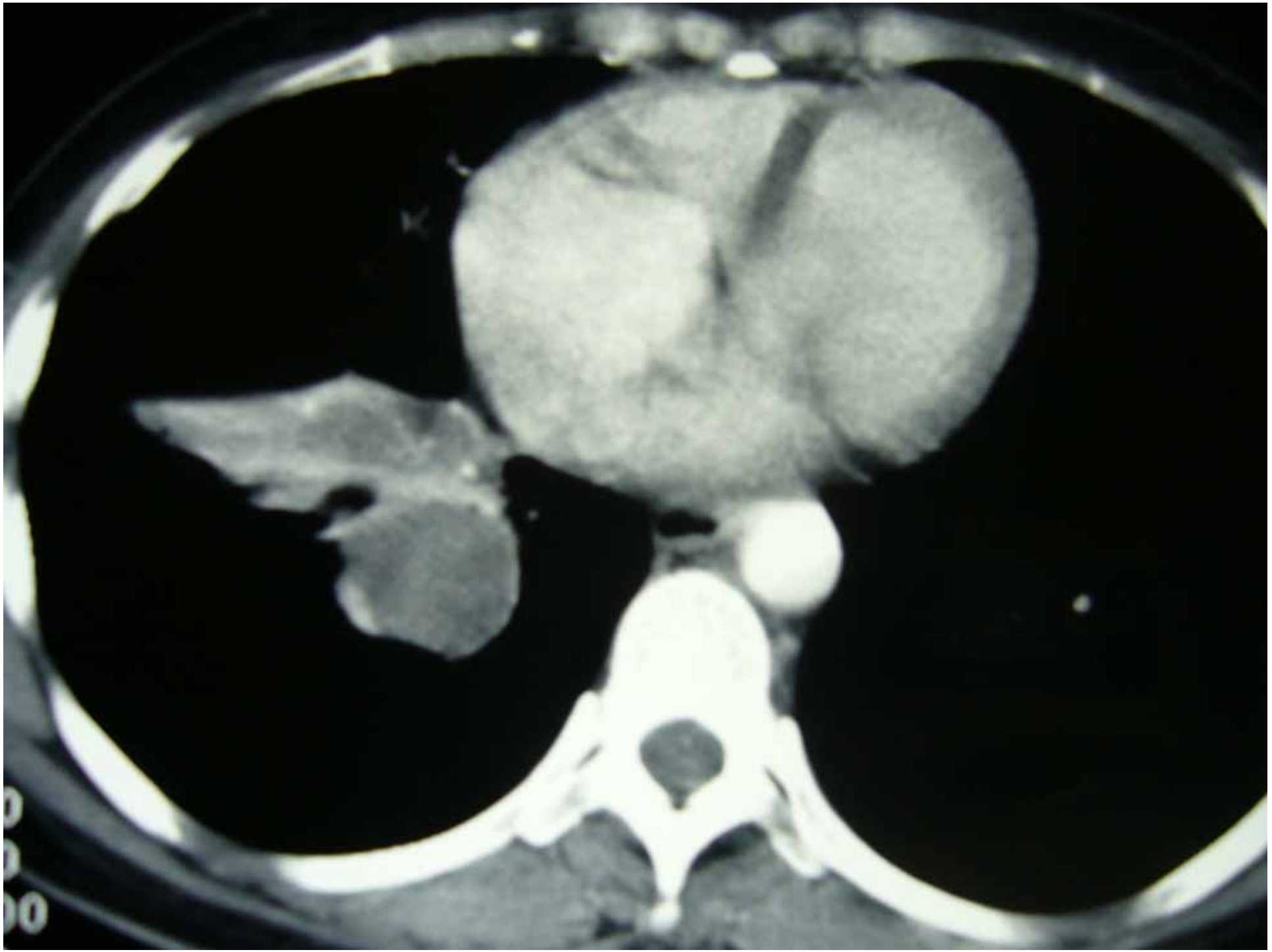

- Bronchial washing AFB DS negative and MTB C&S, fungal C&S not grown
- Bronchial biopsy shows acute and chronic inflammation, marked tissue edema, predominantly lymphocytes and plasma cells scattered , MTB C&S not grown.
- CT Guided trucut lung biopsy revealed inflammatory cells as above. No malignant cell or granuloma
- Refused for surgery

What is the diagnosis?

What should have been done?

Patient finally underwent Rt LL and middle lobectomies- technically difficult

CLINICAL HISTORY

Right lower lobe collapse. CT scan --- mass in right bronchus.

MACROSCOPIC DESCRIPTION

Specimen consists of excised right middle and lower lobes of lung, alltogether weighing 414gms and measuring 140x100x60mm in size. The middle lobe measures 90x60x40mm in size. The lower lobe measures 130x90x70mm in size. Part of right bronchus is included in the excised specimen. There is an enlarged peribronchiolar lymph node measuring 30x20x15mm in size. The cut section shows a mass involving the excised bronchial tissue and also extending along the bronchial tree into the right lower lobe measures 70x30x30mm with the mass about 13mm away from the inferior pleural surface and 20mm away from the lateral pleural surface. The bronchial margin is appear free from the mass is about 15mm clearance. The lung parenchyma adjacent and inferior to mass shows consolidation and extrudes pus upon compression. The mass appears to be circumscribed showing light yellowish surface. Representative sections were submitted into eight blocks.

Block keys :-

A --- Peribronchiolar lymph node
B --- Bronchial margin
C,D&E --- Tumour in right lower lobe
F&G --- Consolidated areas of the lower lobe
H --- Middle lobe

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MICROSCOPIC DESCRIPTION

Sections from the right lower lobe of lung show a nodular mass obstructing the bronchial lumen and extending into the lung parenchyma. The mass is composed of extensive areas of fibrous stroma with dense plasma cells infiltrations and focal aggregates of foamy histiocytes. In

Continued Over

some areas, some of the fibroblasts show bizarre and atypical nuclei but no significant mitotic activity is seen. Areas of myxoid changes are also present within the mass. No features of malignancy are seen. The bronchial margin is clear from the tumor. The peripheral lung parenchyma shows areas of suppurative necrosis surrounded by dense acute and chronic inflammatory cells infiltrations. Associated peribronchiolar and interstitial fibrosis are noted.

The enlarged peribronchial (hilar) lymph nodes show reactive follicular hyperplasia. No malignancy is seen.

The right middle lobe shows congested blood vessels and areas of collapsed alveolar spaces. No tumour is seen.

DIAGNOSIS

Lung lobectomy specimen :-

a) Right lower lobe --- Inflammatory pseudotumour of lung with associated chronic suppurative pneumonia. The tumour is completely excised.

b) Right middle lobe --- Moderate atelectasis.

COMMENT:

The sections were reviewed by 2 other

Final diagnosis: Pulmonary Inflammatory pseudotumour

Post Surgery

4 months - Asymptomatic, ESR reduced, anemia corrected (11g/dl)

- Inflammatory pseudotumour is rare benign tumors, nonneoplastic unregulated growth of inflammatory cells, occasionally aggressive.
- Radiographic,macroscopic and pathological aspects mimic a malignant process.
- Umiker and Iverson first recognized as - “postinflammatory tumors of the lung”.
- The lung and airways are commonest sites, mediastinum, thoracic lymph nodes, and other structures are rare.

- 2 or 3 major types- “plasma cell granuloma” predominantly plasma cells with reticuloendothelial elements and fibrohistiocytic type and pneumonia in organisation.
- Have been also called histiocytoma, xanthoma, xanthogranuloma, fibroxanthoma, mast cell granuloma, and pseudolymphoma.

- Majority are seen in the periphery of the lungs as nodule or a mass, sometimes, calcification, cavity formation, and hilar lymphadenopathy.
- Pleural effusions- typically small and ipsilateral presence in up to 13%.
- It is believed that the inflammatory pseudotumor is a normal inflammatory process which follows an interstitial pneumonia.
- It transforms into an organized pneumonia and eventually, to an inflammatory pseudotumor.
- 1/3 of the lesions start after a respiratory infection.
- The mechanism underlying transformation of inflammation to plasma cell granuloma has not been elucidated clearly.

- The most appropriate approach of inflammatory pseudotumors of the lung should be surgical removal both for diagnosis and for treatment.
- Radiation therapy has been tried for inoperable lesions with variable success.
- Successfully treated with antibiotics, corticosteroids and may regress spontaneously.
- Percutaneous needle aspiration biopsy is rarely helpful, since malignant tumors may be surrounded by inflammation.
- The prognosis is generally excellent