

**Case report:**

**Atypical Radiographic Presentation of Adenocarcinoma Lung**

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**Introduction**

Adenocarcinoma and squamous cell carcinoma are the most frequently diagnosed histological subtype of bronchogenic carcinomas. Though metastatic lesions in lung are common in both the varieties, cavity formation has been documented only with squamous cell type. Here we are going to report a case of pulmonary adenocarcinoma with multiple nodular metastases in both lungs which show central necrosis mimicking cavities.

**Case presentation**

A 58 yrs old non-diabetic non-hypertensive presented with progressive, persistent chest pain for 6 months which was localised over upper part of chest for 1 month. He was a smoker with smoking index 400. Patient also gave history of low-grade fever and generalised body ache for last 5 months when about 9 kg loss of weight with aversion for food were noticed. He had taken anti tubercular drugs empirically for 1 month but there was no symptomatic improvement. Any history of haemoptysis, shortness of breath was also absent.

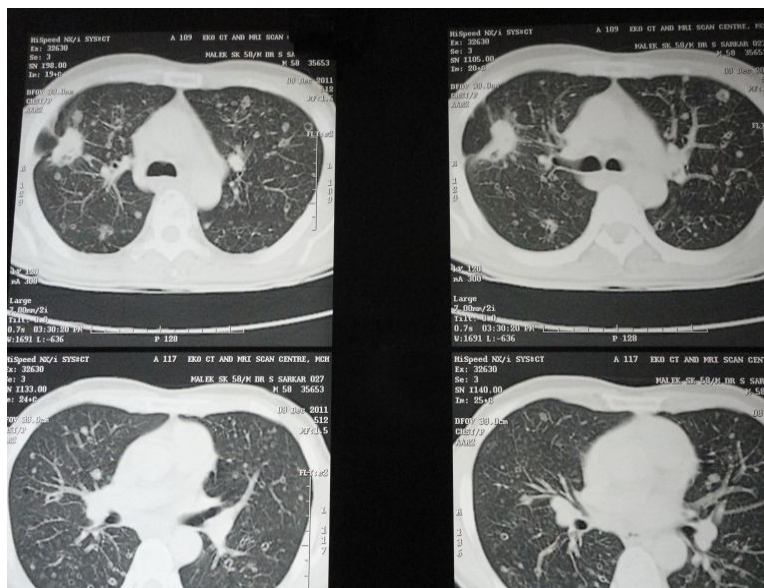
Patient was conscious and alert, respiratory and pulse rate were 26 and 112 per minute respectively, temperature was raised. When clinical examination of respiratory system did not reveal any abnormality, definite tenderness over L3 spine and over manubrium sterni was noted.

Routine blood test showed WBC count was 10200/cu mm with normal differential count. The C-reactive protein was mildly elevated at

34 mg/L. Chest X ray showed a nodular lesion in right upper zone [Fig. 1].



CT scan thorax showed bilateral multiple nodular lesions with central necrosis and a large nodular lesion in right upper lobe measuring 2 cm × 3 cm [Fig. 2].

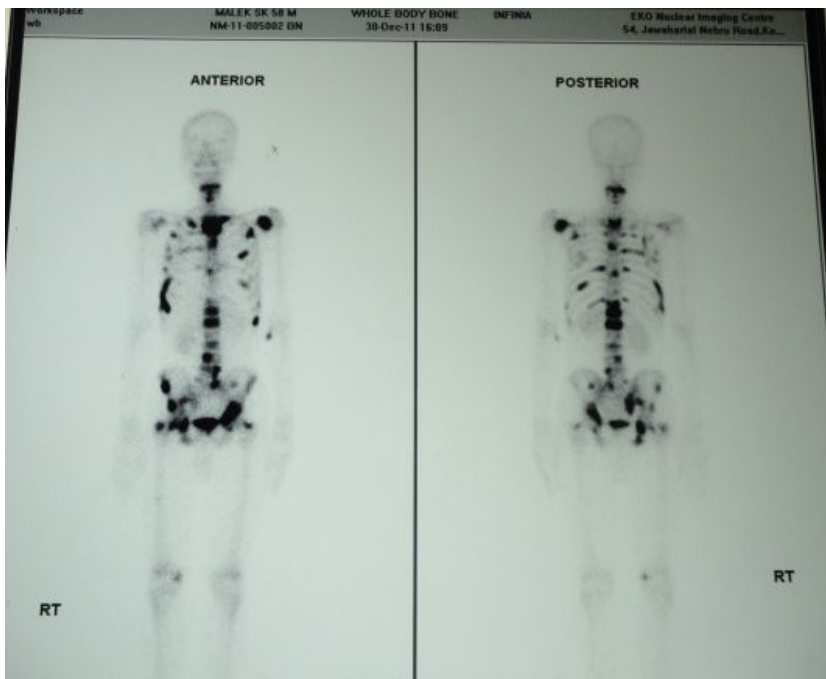


To evaluate the cavitory nodules in CT scan thorax we did special blood tests like angiotensin-converting enzyme levels,

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systemic vasculitic screen, antineutrophil cytoplasmic antibody, and rheumatoid factor but all were within normal limits. We planned for CT guided FNAC from right sided lung SOL but the result came as inconclusive. Simultaneously we did Bone Scan for evaluation of chest pain and generalised body ache and surprisingly the result was positive showing multiple deposits at various sites of body i.e. body of sternum, shoulder, knee joint [Fig. 3]. FNAC from sternal swelling revealed metastatic adenocarcinoma. Bronchoscopy was normal macroscopically. BAL fluid analysis and culture were negative for any infectious pathogen. To detect the primary site we did excision biopsy from sternal swelling and immunohistochemical study for TTF-1 was positive.

### **Discussion**

The differential diagnosis of cavitory pulmonary nodules includes infections (including septic emboli), malignancies (primary or metastatic), lymphoma, vasculitis, sarcoidosis, drug reactions, and rheumatoid nodules.<sup>1</sup> Infection is the most likely cause and may be due to bacterial, fungal, mycobacterial or other opportunistic organisms. The initial presentation of our patient appeared to indicate an infectious disease; however, the microbiological data and failure of response to several broad-spectrum antibiotics went against an infectious

aetiology. Serum ANCA levels were normal and the patient did not have any of the clinical, serologic, or pathologic findings of Wegener granulomatosis.

It is well known that nodular cavitory lesions are associated with squamous cell carcinoma. Among the primary cavitory lung carcinoma 82% are due to this variety and rest are due to adenocarcinoma and large cell carcinoma of Lung.

In primary lung cancer multiple cavitating lesions are rare, however, multifocal

bronchoalveolar cell carcinoma can occasionally have multiple cavitory lesions. Metastatic lung lesions can cavitate, but this occurs less frequently than in primary lung cancers. The frequency of cavitation in metastatic tumor detected by plain radiograph is 4%. Cavitory lung metastasis can occur in any histological type; however, squamous-cell carcinoma is the most common cause of cavitating metastases, comprising 69% of these instances. Adenocarcinoma may be associated with bilateral ground glass opacities and miliary shadows<sup>(2,5)</sup>. Luckraz H et al<sup>3</sup> reported that adenosquamous cell carcinoma may present with bilateral nodular cavitory lesions.

Though cases of cystic and cavity pulmonary metastases from the head & neck, bladder, breast<sup>4</sup>, kidney, synovial sarcoma, and gallbladder have been reported in the literature, bilateral multiple cavitory lesions were not described by adenocarcinoma lung. About 4% of metastases to the lung evolve into cavity lesions. About two-thirds of the multiple cavitating nodules are from squamous cell primary tumors and many of the rest are may be due to adenocarcinoma of lungs.

### **Conclusion**

Adenocarcinoma lung may present with bilateral nodular cavitory lesions with central necrosis though it is very rare.

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