

Lung Adenocarcinoma with Mixed Solid and Crazy-paving Appearances

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Abstract

‘Crazy-paving’ refers to the superimposition of ground-glass opacity and linear pattern on computed tomography (CT) images. ‘Crazy-paving’ was initially pathognomonic for alveolar proteinosis. Lung adenocarcinoma demonstrating both solid and crazy-paving appearances on CT is a rare occurrence.

CLINICAL IMAGE

TITLE OF CASE :

Lung Adenocarcinoma with Mixed Solid and Crazy-paving Appearances

KEY CLINICAL MESSAGE:

‘Crazy paving’ is referring to the superimposition of ground-glass opacity and linear pattern resembling irregularly shaped paving stones on CT images. Initially ‘crazy-paving’ was described as pathognomonic sign for alveolar proteinosis. Subsequently, this pattern has been reported in a variety of idiopathic, neoplastic, infectious, inhalational, and sanguineous disorders of the lung. We demonstrated atypical computed tomography images of lung adenocarcinoma demonstrating both solid and crazy paving appearance.

Keywords: Crazy paving, adenocarcinoma, lung

CASE:

A 69-year-old female non-smoker presented with prolonged coughing with haemoptysis, loss of weight and loss of appetite. The initial CT scan revealed a heterogeneous mass in the lower lobe of the right lung with surrounding ‘crazy paving’ appearance (Figure 1A). The CT-guided biopsy revealed invasive moderately differentiated adenocarcinoma (eGFR positive) of the lung. She also developed right humeral pathological fracture secondary to bone metastasis. Her disease initially showed some improvement with Gefitinib, but progressed 6-months later. A repeat CT scan showed the whole aforementioned area of crazy paving appearance was completely replaced by solid tumour, confirming that the ‘crazy paving’ was tumour infiltration (Figure 1B).

Lung carcinoma usually appears as nodule (solid or subsolid) or mass on CT.¹ Rarely, they may appear as ground glass opacity or consolidation.¹ For lung carcinoma to demonstrate crazy paving as the CT appearances is rare despite its recognized existence and is usually caused by adenocarcinoma. Demonstration of crazy paving surrounding a sizable solid component of lung adenocarcinoma is even rarer. For lesion with solid and crazy paving changes, the solid component likely represent invasive portion of the neoplasm, whereas, the peripheral ‘crazy paving’ opacity may represent areas of lepidic growth.

REFERENCES

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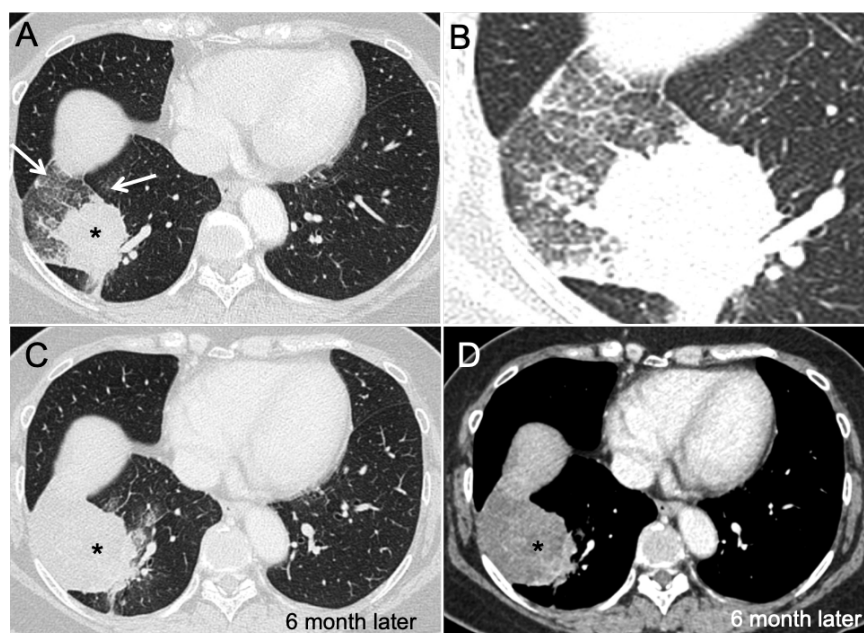


Figure 1

Selected thoracic CT images on axial view showing primary lung adenocarcinoma with both solid (asterisks) and 'crazy paving' (white arrow) appearances (A & B). B is a close up view of A. The area of 'crazy paving' is completely replaced by solid mass (C&D) while maintaining the same demarcation confirming that the 'crazy paving' is indeed tumour infiltration.

