A 65-year-old male patient was evaluated for a 3 months history of cough, fatigue and mild dyspnoea. The patient was a non-smoker and did not report drugs consumption. Blood tests revealed moderate peripheral eosinophilia. A chest-computed tomography (CT) was performed.

Imaging Findings:

Chest CT revealed in the right upper lobe scattered subpleural areas of increased lung attenuation (ground-glass opacity) with superimposed interlobular septal thickening and intralobular lines, configuring a “crazy paving pattern” (Fig. 1, 2). There were no pleural effusion nor a mediastinal lymphadenopathy. The diagnostic suspicion of chronic eosinophilic pneumonia (CEP) was expressed.

The patient underwent bronchoscopy with analysis of the bronchio-alveolar lavage, revealing 40% eosinophils on differential cell count with an absence of infectious pathogens. Transbronchial biopsy showed a histological pattern consisting of thickened alveolar septa, with a remarkable accumulation of eosinophils and lymphocytes. These findings confirmed the diagnostic suspicion of CEP.

Following corticosteroid therapy, the patient’s symptom regressed and follow-up CT showed complete resolution of lung parenchymal abnormalities (Fig. 3).

Discussion:

Chronic eosinophilic pneumonia (CEP), together with simple pulmonary eosinophilia (Loeffler syndrome), acute eosinophilic pneumonia and idiopathic hypereosinophilic syndrome, belongs to eosinophilic lung diseases of unknown cause, consisting of a group of pulmonary disorders associated with peripheral or tissue eosinophilia [1]. Eosinophilic lung diseases of known cause include allergic bronchopulmonary aspergillosis, bronchocentric granulomatosis, parasitic infections, drug reactions, or vasculitis [1].

CEP was first described by Carrington in 1969 as a chronic form of Loeffler’s syndrome, which is a self-limiting disease characterized by areas of parenchymal consolidation that disappear within several days. The exact prevalence of CEP is unknown, however, it represents a rare disorder that often involves middle-aged patients and occurs more frequently in women [2, 3].

Clinical evaluation, laboratory tests and radiological appearance are synergetic in the diagnosis of CEP, which is based on the following criteria:

1) respiratory symptoms, such as dyspnoea and non-productive cough, often non-specific and developing
insidiously with a duration of more than 2 weeks before the diagnosis is made; CEP may also manifest itself with
general symptoms such as asthaenia, low-grade fever and weight loss [3];
2) blood eosinophilia, that may be mild, moderate, or severe, and alveolar eosinophilia, with BAL analysis typically
revealing a very high percentage of eosinophils [1, 3];
3) radiological appearance consisting in peripheral pulmonary infiltrates, mainly involving the upper lobes. Chest
radiographs may depict peripheral lung consolidations, but CT is a more sensible technique in evaluation of lung
abnormalities. CT images usually show non-segmental areas of parenchymal consolidations with peripheral
distribution and sometimes ground glass opacities with retication. Other radiological finding may be band-like
opacities and, in 10% of cases, pleural effusion [1] The crazy paving pattern, which is recognized to be a
manifestation of several pulmonary diseases, has been rarely described associated to CEP [4, 5];
4) exclusion of known causes of eosinophilic disease [1, 3].

Histology is usually not necessary for the definitive diagnosis and typically reveals interstitial and alveolar
inflammation with a predominance of eosinophils.

CEP presents a good prognosis with regression after corticosteroid therapy; in fact, some authors have indicated the
prompt response to steroid treatment to be a diagnostic criterion [3].
Our patient’s symptoms and peripheral eosinophilia, together with the radiological pattern consisting in peripheral
location of findings and upper lobe involvement, allowed us to suspect CEP, even if the “crazy paving” pattern is not
common in this disease.

**Differential Diagnosis List:** Chronic eosinophilic pneumonia with crazy paving pattern, Cryptogenic organizing
pneumonia, Churg-Strauss syndrome, Loeffler syndrome

**Final Diagnosis:** Chronic eosinophilic pneumonia with crazy paving pattern

**References:**

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section CT of the lungs: radiologic-pathologic overview. Radiographics 23(6):1509-19 (PMID: 14615561)

Description: Axial chest CT image shows peripheral area of crazy paving of the right pulmonary apex.
Origin: Tricarico C, Radiological Center “Raggi X”, Modugno, Italy
Description: Axial chest CT image shows peripheral areas of crazy paving of the right pulmonary apex.
Origin: Tricarico C, Radiological Center "Raggi X", Modugno, Italy
**Description:** Axial chest CT image shows peripheral areas of crazy paving of the right pulmonary upper lobe. **Origin:** Tricarico C, Radiological Center "Raggi X", Modugno, Italy
Description: Axial chest CT image shows peripheral scattering areas of crazy paving of the right pulmonary upper lobe. Origin: Tricarico C, Radiological Center "Raggi X", Modugno, Italy
Description: Axial chest CT image shows subpleural scattering focal areas of crazy paving of the right pulmonary upper lobe. Origin: Tricarico C, Radiological Center "Raggi X", Modugno, Italy
Description: Axial chest CT image shows a focal paramediastinal area of crazy paving of the right pulmonary upper lobe 

Origin: Tricarico C, Radiological Center "Raggi X", Modugno, Italy
Description: Axial chest CT image shows an anterior subpleural area of crazy paving of the right pulmonary upper lobe. Origin: Tricarico C, Radiological Center "Raggi X", Modugno, Italy
Description: Coronal chest CT image shows the anterior subpleural area of crazy paving of the right upper lobe. Origin: C Tricarico, Radiological Center "Raggi X", Modugno, Italy
**Description:** Coronal chest CT image shows the anterior subpleural area of crazy paving of the right upper lobe. **Origin:** C Tricarico, Radiological Center "Raggi X", Modugno, Italy
Description: Coronal chest CT image shows the scattered subpleural areas of crazy paving of the right upper lobe. Origin: C Tricarico, Radiological Center "Raggi X", Modugno, Italy
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**Description:** Coronal chest CT image shows the scattered subpleural areas of crazy paving of the right upper lobe. **Origin:** C Tricarico, Radiological Center "Raggi X", Modugno, Italy
**Description:** Sagittal chest CT image shows the scattered subpleural areas of crazy paving of the right upper lobe. **Origin:** C Tricarico, Radiological Center "Raggi X", Modugno, Italy
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Figure 3

Description: Axial chest CT image shows complete resolution of the crazy paving areas. Origin: Tricarico C, Radiological Center "Raggi X", Modugno, Italy
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