Pneumonia Organizativa Criptogénica: Pistas Radiológicas e Resposta aos Corticoesteróides

Cryptogenic Organizing Pneumonia: Radiological Clues and Corticosteroids Responsiveness

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Cryptogenic organizing pneumonia (COP) is the idiopathic form of organizing pneumonia (OP) which is a type of interstitial lung disease that affects the distal bronchioles, respiratory bronchioles, and alveoli. Its diagnosis is histopathological. However, suggestable clinical presentation (despite being unspecific – fever, cough, malaise, dyspnea) and abnormal radiological findings, that are more specific, are key to correctly identify this entity. Any underlying condition should be excluded with a detailed clinical history and evaluation. Responsiveness to corticosteroids is also an important feature.[1,2]

We report the case of a 48-year-old male with history of pulmonary tuberculosis during childhood, chronic rhinosinusitis, and SARS-CoV-2 more than a year before, with few symptoms and no severity criteria. The patient presented to the emergency room (ER) after 3 weeks of persistent headaches, muscle pain, high fever, and an isolated event of watery stools. Remaining clinical history was unremarkable. Physical examination was normal and laboratory studies revealed high levels of C reactive protein (CRP) – 28 mg/dL, (N < 1.0 mg/dL), discrete elevation of aspartate transaminase (AST) 72U/L (N 15-40 U/L) and alanine transaminase (ALT) 68U/L (N 10-40U/L), negative serology for *Borrelia* and negative urinary antigens for both *Streptococcus pneumoniae* and *Legionella pneumophila*. A nasopharyngeal polymerase chain reaction (PCR) test for SARS-CoV-2 was also negative. Chest X-ray was normal. The patient was discharged with a presumptive diagnosis of Q fever (despite no exposition risk history) and treated accordingly with doxycycline. A 72-hour follow-up appointment noted insufficient improvement of symptoms, persistent high fever (40ºC), high CRP 26 mg/dL, AST 74 U/L and ALT 66 U/L. Thus, suspecting antibiotic failure, doxycycline was switched to levofloxacin. After 48 hours, the patient returned to the ER: pale, diaphoretic, pyretic (41ºC) and hypotensive - blood pressure 94/50 mmHg. The patient was admitted for further investigations.

Computed tomography (CT) lungs scan was performed. Significant parenchyma alterations were found: extensive bilateral (but mostly right) peribronchial consolidated opacities and nodules, ground glass opacity areas disperse peripherally and distinct air bronchogram within consolidations. There was no pleural effusion, nor mediastinal adenopathies (Fig. 1).

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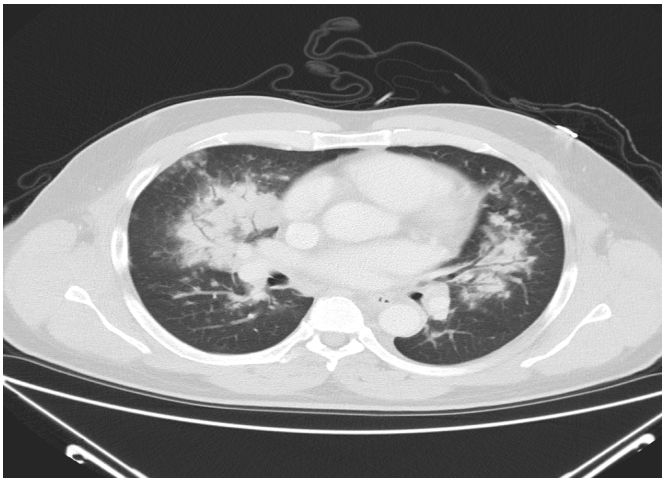
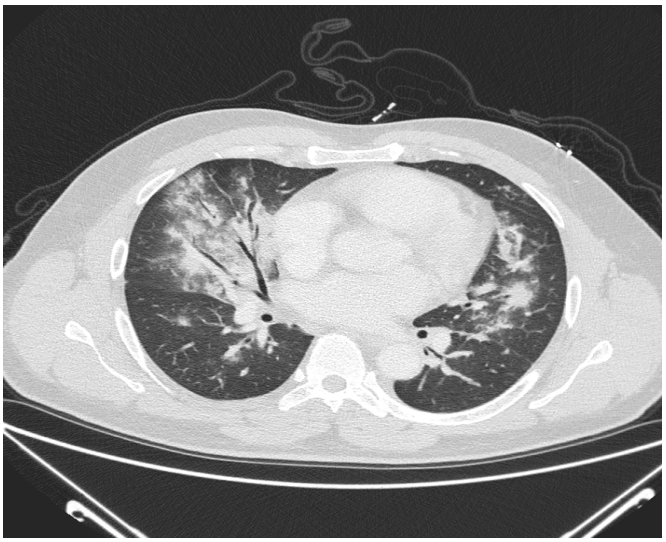
A.



B.



C.

Figure 1 (A, B, C). CT lungs scan with contrast, axial view.

Presumptive diagnosis of OP was assumed based on these typical radiological findings. Bronchofibroscopy was performed, including bronchoalveolar lavage and transbronchial lung biopsy. Bacteriological evaluation of the samples was negative, including for tuberculosis. Malignancy was also excluded. Histopathological findings, including Mason bodies, confirmed OP. Additional exams were conducted, such as a complement and autoimmunity study, viral serology tests and an interferon gamma release assay (IGRA), all negative. Thus, the diagnosis of COP was established after demonstration of OP histopathological features upon exclusion of underlying associated conditions or triggering factors.

The patient began corticosteroids therapy with clinical improvement and after 6 days CT was repeated also revealing improvement of previous findings (Fig. 2). He was discharged after 11 days of admission. The patient remains well with complete symptomatic resolution and under corticosteroid therapy.

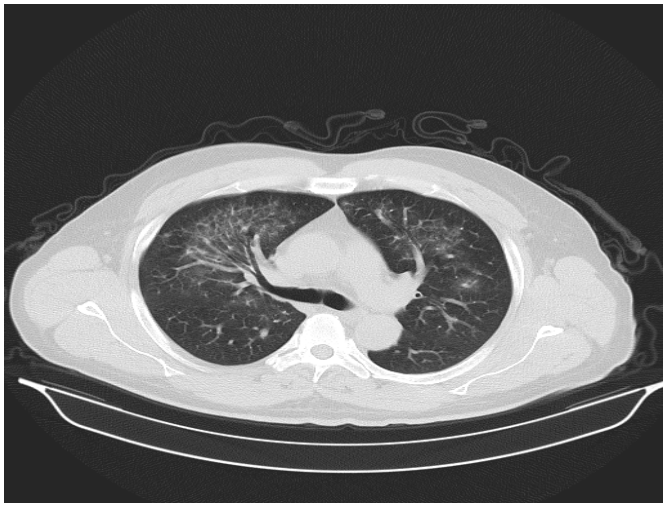


Figure 2. CT lungs scan with contrast, axial view - after 6 days of corticosteroids therapy.

Nevertheless, a question remained, could have this been the aftermath of a SARS-CoV-2 re-infection that was unfortunately missed? OP is a relatively frequent late phase complication of COVID-19.[3,4] Only one PCR test was performed, after 3 weeks of symptoms. Since this case happened in January 2022, during this pandemic's 5th wave in Portugal, and being the Omicron variant the most prevalent, we could hypothesize that incubation period had already passed when testing occurred, thus missing a probable diagnosis.

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