# Caso Clínico
## *Case Report*

Sandra Figueiredo[1]
António Morais[2]
Adriana Magalhães[2]
Conceição Souto Moura[3]
João Almeida[2]
Isabel Gomes[2]

# Bronquiolite constritiva ocupacional (?) em doente com exame físico, radiológico e funcional normal

## *Occupational (?) constrictive bronchiolitis with normal physical, functional and image findings*

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## Resumo

A bronquiolite constritiva é caracterizada por alterações das paredes dos bronquíolos membranosos e respiratórios. Estas alterações incluem um espectro de alterações que podem variar, desde a inflamação à fibrose concêntrica progressiva, com obstrução completa do lúmen bronquiolar. O diagnóstico pode ser sugerido pela história clínica e por alterações radiológicas e funcionais. No entanto, o exame físico e os exames complementares de diagnóstico podem ser normais, o que dificulta o diagnóstico, sendo necessário um elevado índice de suspeita para se sujeitar o doente a exames invasivos, tal como a biópsia pulmonar cirúrgica. Os autores apresentam um caso clínico de uma doente com quadro arrastado de tosse e dispneia, com exame físico, funcional e imagiológico normais, cujo estudo exaustivo veio a revelar o diagnóstico de bronquiolite constritiva.

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**Palavras-chave:** Bronquiolite constritiva, óxido de ferro.

## Abstract

Constrictive bronchiolitis is characterized by alterations in the walls of membranous and respiratory bronchioles. These changes lead to concentric narrowing or complete obliteration of the airway lumen. Suspicion of possible bronchiolar disorders may arise from clinical, funcional, and radiologic findings. However, constrictive bronchiolitis may be present even with normal physical, functional and image findings, which turns the diagnosis difficult. A high index of suspicion is necessary to justify invasive tests that lead to pulmonary biopsy. In this report, we describe a patient with cough and dyspnoea, with normal physical, functional and image findings, whose work-up leaded to the diagnosis of constrictive bronchiolitis.

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**Key-words:** Constrictive bronchiolitis; iron oxide.

[1] Internato Médico. Serviço de Pneumologia
[2] Assistente Hospitalar Graduado. Serviço de Pneumologia
[3] Assistente Hospitalar Graduado. Serviço de Anatomia Patológica
Hospital de São João (EPE), Porto

## Case report

The authors present a case report of a 26 years old Caucasian female that was referred to hospital with symptoms of cough and dyspnoea at the work place, which had been present for 2 years. She had no history of tobacco use or previous respiratory disease. She had worked with copy-machines for several years until 2 months before the first visit. Symptoms improved when she was away from the work place and, at the time of observation, she had no respiratory symptoms and presented a normal physical examination, including pulmonary and cardiac auscultation.

Laboratory studies, including blood tests, RAST and D-dimers, were within normal range. Lung function tests with spirometry, lung volumes and DLCO were normal. Arterial blood gases were also normal. A chest radiograph (Fig. 1) revealed no abnormalities. Subsequently, a High Resolution Computerized Tomography (HRCT) of the chest was performed (Fig. 2A, B and C) which was normal, as well.

The patient returned to the work place for a fortnight just to perform a PEF curve with morning and evening measurements, but it did not suggest occupational asthma. A methacoline challenge was undertaken and was negative. She managed 517 metres during the 6-minute walk test with no significant drop in saturation (3%).

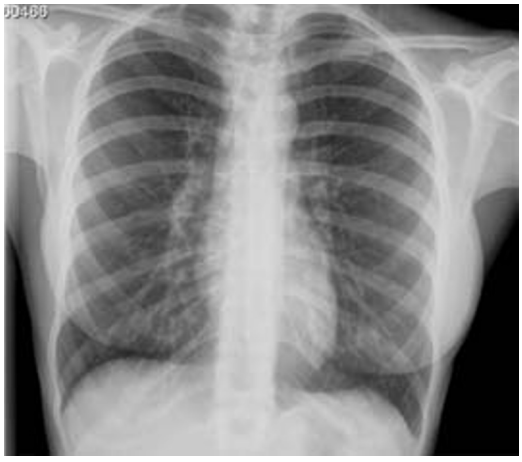

Fig. 1 – Chest radiograph

Ten months after the first visit, the patient was still away from work, without respiratory symptoms outside the context of common colds, and her physical examination was still normal, as well as pulmonary function tests and methacoline challenge. So as to exclude any involvement not detected by the previous tests, fiber optic bronchoscopy was then performed, with unremarkable endoscopic findings. However, the bronchoalveolar lavage done in the right middle lobe revealed a lymphocytosis (32,4%) with a normal CD4/CD8 ratio.


Fig. 2 – (A,B and C) High-resolution computed tomography of the chest