

## Dendriform Pulmonary Ossification in a Patient with Fibrotic Interstitial Lung Disease

### Ossificação Pulmonar Dendríforme num Doente com Doença Intersticial Pulmonar Fibrosante

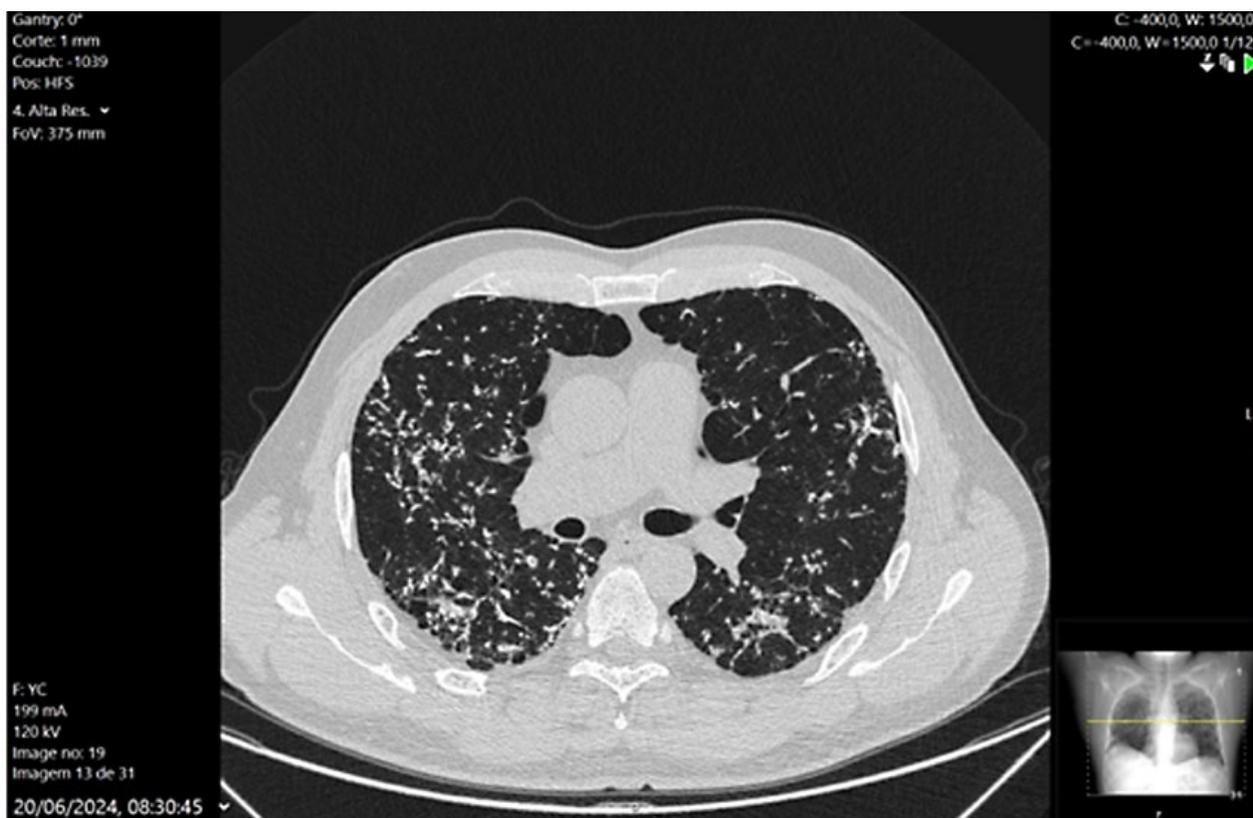
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**Keywords:** Idiopathic Pulmonary Fibrosis; Lung Diseases, Interstitial; Ossification, Heterotopic.

**Palavras-chave:** Doenças Pulmonares Intersticiais; Fibrose Pulmonar Idiopática; Ossificação Heterotópica.

Dendriform pulmonary ossification (DPO) is a rare condition involving mature bone formation within the lung parenchyma, often associated with chronic interstitial lung diseases.<sup>1,2</sup> Diagnosis is usually established through imaging or histopathological findings.<sup>3,4</sup>

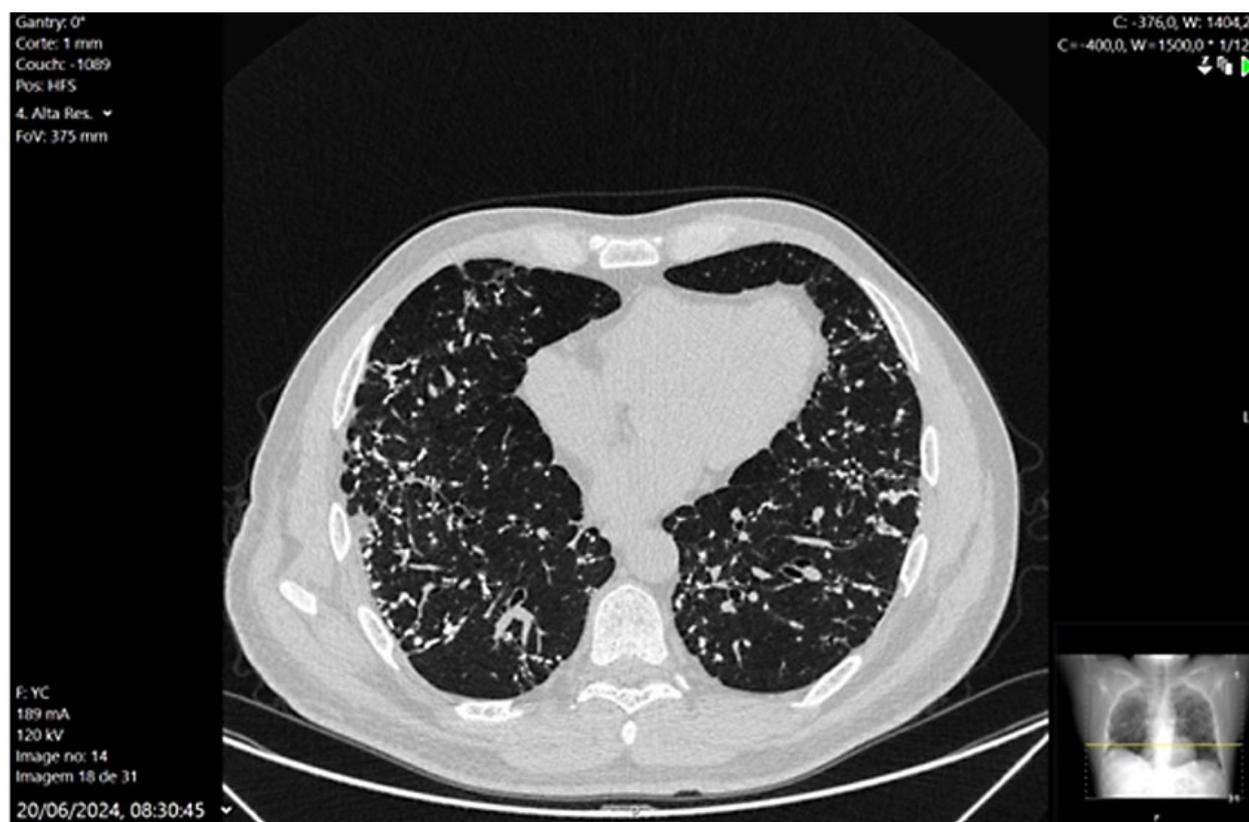
A 54-year-old Brazilian man, nonsmoker, with a history of fibrotic interstitial lung disease (FILD) diagnosed by lung biopsy at age 25 in his origin country and stable symptoms for decades, presented with progressive exertional dyspnoea and fatigue over several months. Arterial blood gas showed a PaO<sub>2</sub> of 87 mmHg on room air. High-resolution computed tomography (CT) revealed extensive bilateral branching calcifications with traction bronchiectasis and architectural distortion (Figs.1 and 2), consistent with DPO. Pulmonary function tests showed a mixed ventilatory defect with bronchodilator response and moderately reduced diffusion capacity (DLCO 45%). Blood tests were unremarkable.



**Figure 1:** HRCT showing bilateral dendriform calcifications and fibrotic distortion.

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**Figure 2:** HRCT showing bilateral dendriform calcifications and fibrotic distortion.

DPO secondary to FILD was assumed. No specific treatment had been initiated beyond supportive care.

DPO is a rare complication of chronic interstitial lung disease, particularly FILD. As with other differential diagnosis (Table 1), granulomatous diseases and nodular ossifications were deemed less likely due to the typical imaging pattern and absence of systemic markers. Recognizing DPO helps avoid misinterpretation and unnecessary invasive procedures, enabling management focused on the underlying disease. ■

#### Contributorship Statement

NP, PTA and LPS - Conception and design, data acquisition and interpretation, drafting, final approval.

#### Declaração de Contribuição

NP, PTA e LPS – Concepção e desenho; recolha e interpretação de dados; redação; aprovação final.

#### Ethical Disclosures

Conflicts of Interest: The authors have no conflicts of interest to declare.

**Table 1:** Common causes and imaging patterns of pulmonary calcification and ossification.

TYPE	UNDERLYING PROCESSES	HRCT FINDINGS
<b>Dendriform Pulmonary Ossification</b>	Idiopathic or associated with fibrotic interstitial lung disease	Linear calcific densities (1-5 mm), typically in peripheral lung zones
<b>Nodular Pulmonary Ossification</b>	Chronic cardiac disease (e.G., mitral stenosis, pulmonary venous congestion)	Peripheral nodular calcifications (1-5 mm); coarse reticulation in lower lobes
<b>Metastatic Pulmonary Calcification</b>	ESRD on dialysis, liver transplant, malignancy/hypercalcemia, hyperparathyroidism, hypervitaminosis D	Upper lobe ground-glass nodules; diffuse or focal calcified nodules
<b>Dystrophic Calcification</b>	Granulomatous diseases (e.g., tuberculosis, fungal infection, sarcoidosis, amyloidosis)	Depends on underlying disease
<b>Pulmonary Alveolar Microlithiasis</b>	Autosomal recessive <i>SLC34A2</i> gene mutation	Diffuse micronodules with “sandstorm” appearance; lower lobes

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