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Clinical Image

Diffuse Idiopathic Pulmonary Neuroendocrine Cell Hyperplasia Causing Chronic Cough☆

Hiperplasia difusa idiopática de células neuroendocrinas como causa de tos crónica

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A 78-year-old woman, non-smoker, with a history of hypertension treated with enalapril, consulted for a 1-year history of chronic cough, with no other accompanying symptoms. No improvement was observed after withdrawal of angiotensin-converting enzyme (ACE) inhibitor treatment.

Chest X-ray and lung function tests showed no significant changes. Chest computed tomography revealed multiple solid bilateral pulmonary nodules in the left lower lobe, the largest of which measured 10 mm, along with diffuse thickening of the bronchial walls and mosaic attenuation pattern suggestive of air trapping on expiration (Fig. 1A).

Fine-needle aspiration and biopsy were obtained from the largest nodule, which showed well-differentiated neuroendocrine proliferation on cytology, considered low risk due to Ki-67 negativity, suggestive of a small carcinoid tumor (Fig. 1B). This, in conjunction with radiological findings, was consistent with the diagnosis of diffuse idiopathic pulmonary neuroendocrine cell hyperplasia (DIPNECH).

DIPNECH is a rare disease, and the few cases described in the literature are mostly in middle-aged women.[1] It has no specific clinical features, and is generally diagnosed incidentally from surgical specimens resected for other reasons, or after the diagnostic study of dyspnea or chronic cough.[1,2] Although it is considered precancerous, the risk of progression to high-grade neuroendocrine tumor seems to be low.[1,2]

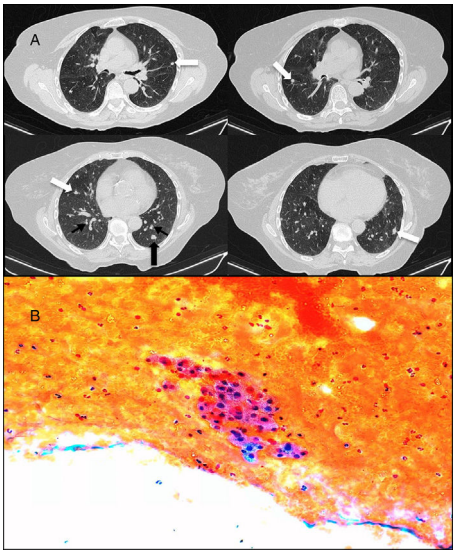

Fig. 1. (A) Computed axial tomography slices in expiration, without the administration of intravenous contrast: multiple bilateral solid pulmonary nodules (white arrows), diffuse thickening of the bronchial walls (thin black arrows), associated with a mosaic attenuation pattern, suggestive of air trapping (asterisks). The nodule in the left lower lobe (thick black arrow) is the nodule that was aspirated. (B) Cytology of fine-needle aspiration-biopsy of one of the nodules, showing a group of finely granular cytoplasmic cells with slightly irregular nuclei and punctiform chromatin on a hematic background.

References

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2. Wirtschafter E, Walts AE, Liu ST, Marchevsky AM. Diffuse idiopathic pulmonary neuroendocrine cell hyperplasia of the lung (DIPNECH). Curr Best Evid Lung. 2015;193:659–67.

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