## The Role of Computed Tomography in the Diagnosis of Relapsing Polychondritis

### *Papel de la tomografía computarizada en el diagnóstico de la policondritis recidivante*

*Dear Editor,*

We read with great interest the well-written case report by Sousa et al.[1] regarding a 68-year-old woman with recurrent episodes of acute dyspnea and wheezing for 3 years. She was treated for asthma, without clinical improvement. The authors reported that chest computed tomography (CT) revealed tracheal and bronchial wall thickening. In the subsequent year, the patient developed polyarthritis, recurrent ear pain, and saddle-nose deformity, and relapsing polychondritis (RP) was diagnosed. The authors also commented on the clinical challenge of this diagnosis.

We would like to highlight the role of CT as an important tool for the evaluation of patients with tracheobronchial wall thickening. CT is the best non-invasive method for the evaluation of tracheobronchial lesions. The tomographic differential diagnosis of diffuse tracheobronchial wall thickening is broad, and includes granulomatosis with polyangiitis, RP, tracheobronchopathia osteochondroplastica, amyloidosis, papillomatosis, sarcoidosis, and infectious diseases, such as tuberculosis, paracoccidioidomycosis, and rhinoscleroma.[2,3] The anterior portion of the trachea and main bronchi consists of horseshoe-shaped cartilaginous rings; the posterior portion lies between the open ends of the cartilaginous rings and consists of a fibromuscular membrane. Diseases that affect the cartilaginous rings are characterized tomographically by sparing of the posterior (membranous) wall, as observed in the case reported by Sousa et al.[1] This criterion is important for differential diagnosis, as only two diseases involve the anterior and lateral walls, sparing the posterior wall: RP and tracheobronchopathia osteochondroplastica.

RP is a rare autoimmune disorder characterized by recurrent episodes of cartilaginous inflammation with subsequent degeneration, loss of structure, and fibrosis. It results in the destruction of cartilage in the ears, nose, joints, and upper airways, including the larynx and subglottic trachea. The diagnosis of RP is based on a set of clinical evidence, imaging studies, and, rarely, biopsy of involved cartilage. No specific laboratory test is diagnostic for RP. Clinically, the diagnosis can be made when three or more of the following features are present: bilateral recurrent auricular chondritis, non-erosive seronegative inflammatory polyarthritis, chondritis of nasal cartilages, inflammation of ocular structures, respiratory tract chondritis, and cochlear or vestibular damage.[2•5] The most common CT findings are smooth anterior and lateral airway-wall thickening with sparing of the posterior membranous wall. These changes are thought to occur secondary to cartilaginous destruction and fibrotic replacement, reflecting relatively late airway manifestations of RP. Calcification of the cartilages may also be seen. Loss of cartilaginous support due to cartilaginous inflammation and destruction also results in excessive dynamic expiratory airway collapse (tracheobronchomalacia).[2•5] The tomographic differential diagnosis of RP includes mainly tracheobronchopathia osteochondroplastica, a benign idiopathic disease of the trachea and major bronchi characterized by the presence of multiple submucosal osteocartilaginous nodules. CT may demonstrate multiple submucosal nodules, with or without calcification, which may project into the airway lumen. The nodules involve the anterior and lateral walls of the tracheobronchial tree, with sparing of the posterior wall.[2•4] In conclusion, the CT findings of anterior and lateral tracheobronchial wall thickening with sparing of the posterior wall are highly suggestive of RP.

### References

1. Sousa M, Silva J, Rodrigues B. Relapsing polychondritis with airway involvement: a clinical challenge. Arch Bronconeumol. 2017, http://dx.doi.org/10.1016/j.arbres.2016.12.017.
2. Acar T, Bayraktaroglu S, Ceylan N, Savas R. Computed tomography findings of tracheobronchial system diseases: a pictorial essay. Jpn J Radiol. 2015;33:51–8.
3. Prince JS, Duhamel DR, Levin DL, Harrell JH, Friedman PJ. Nonneoplastic lesions of the tracheobronchial wall: radiologic findings with bronchoscopic correlation. Radiographics. 2002;22:S215–30.
4. Lee KS, Ernst A, Trentham DE, Lunn W, Feller-Kopman DJ, Boiselle PM. Relapsing polychondritis prevalence of expiratory CT airway abnormalities. Radiology. 2006;240:565–73.
5. Mathian A, Miyara M, Cohen-Aubart F, Haroche J, Hie M, Pha M, et al. Relapsing polychondritis: a 2016 update on clinical features, diagnostic tools, treatment and biological drug use. Best Pract Res Clin Rheumatol. 2016;30:316–33.

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## Core-Needle Biopsy in the Diagnosis of Lung Cancer☆

### *Biopsia con aguja gruesa en el diagnóstico de cáncer de pulmón*

*To the Editor,*

We read with great interest the SEPAR recommendations for the diagnosis and treatment of non-small cell lung cancer, published as a special issue in May 2016.[1]

We found it well adapted to the needs of the pulmonologist today.

However, in the subsection on minimally invasive techniques in the section dealing with cytohistological confirmation and staging studies, we were surprised to find that core needle biopsy (CNB) was not included among the techniques described.

This is a very similar procedure to transthoracic fine needle aspiration biopsy (TFNAB). The same guidance techniques, generally computed tomography (CT) and sometimes the ultrasound,

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