

Congenital Pulmonary Sequestration Supplied by the Right Coronary Artery

Secuestro pulmonar congénito irrigado por la arteria coronaria derecha

Alicia Laborda,^a Jose Ramon Ruiz,^b Miguel Ángel de Gregorio^{a,c,d,*}

^a Grupo de Investigación en Técnicas de Mínima Invasión (GITMI), Universidad de Zaragoza, Zaragoza, Spain

^b Servicio de Cardiología, Hospital Clínico Universitario Lozano Blesa, Zaragoza, Spain

^c Radiología Intervencionista, Hospital Clínico Universitario Lozano Blesa, Zaragoza, Spain

^d CIBER de Bioingeniería, Biomateriales y Nanomedicina (CIBER-BBN), Zaragoza, Spain

A 67-year-old patient, with no respiratory symptoms, underwent coronary catheterization for revascularization of stenosis in the right coronary artery, during which we observed a large caliber artery, apparently bronchial, extending toward the left lung base (Fig. 1A). Multislice computed tomography angiography revealed a rounded heterogeneous consolidation, 3–4 cm, in the left cardiophrenic angle. Drainage veins extending toward the left atrium were observed within the consolidation (Fig. 1B). Bronchopulmonary sequestration of the left lower lobe was diagnosed. Pulmonary sequestration (PS) is a rare malformation (0.15%–6.4% of all bronchopulmonary malformations). It is defined as an area of non-functioning lung, unconnected, or poorly connected with the tracheobronchial tree, usually irrigated by the systemic circulation. PS is conventionally classified as intralobar or extralobar.

Pryce¹ identifies 3 types of PS, depending on its relationship with the bronchial tree and its blood supply. This was extralobar PS type 3, since the patient presented an extrabronchial pulmonary area irrigated by the systemic circulation. Irrigation was supplied by the right coronary artery; this is an extraordinarily rare observation – only 15 cases have been reported in the medical literature.²

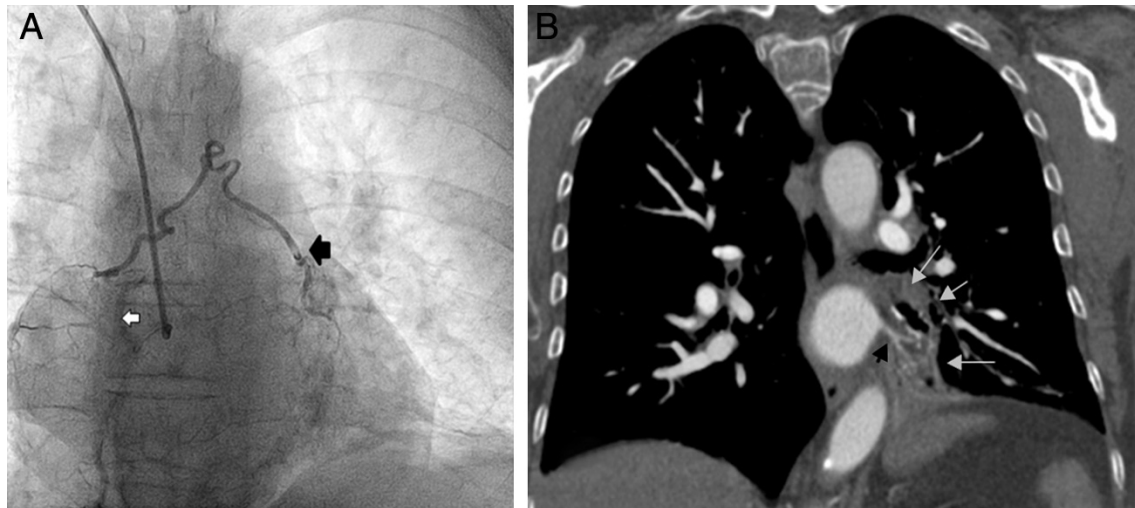


Fig. 1. (A) Coronary catheterization. Right coronary artery (white arrow). Abnormal artery extending toward the left lower lobe base (black arrow). (B) Chest computed tomography angiography – coronal reconstruction. Small arrows indicate the collapsed left lower lobe. The black arrow indicates the drainage vein in the left atrium.

References

1. Pryce DM. Lower accessory pulmonary artery with intralobar sequestration of lung: a report of seven cases. *J Pathol Bacteriol.* 1946;58:457–67.
2. Chou DW, Chung KM, Ng Jao YT, Fang CC. Pulmonary sequestration supplied by the right coronary artery. *Intern Med.* 2014;53:2553–4.