Multiple Pulmonary Artery Fistulas Causing Partial Lung Edema

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A 67-year-old man with a history of left internal mammary artery (LIMA) grafting to the coronary artery and ligation of the coronary-to-pulmonary artery fistula presented with progressive dyspnea. Computed tomography (Picture 1A) showed partial lung edema predominantly in the upper lobes. Computed tomographic angiography (Picture 1B) and selective angiography revealed multiple fistulas from the LIMA (Picture 1C, left), the bronchial arteries (middle), and the celiac artery (right), into the bilateral pulmonary arteries. Notably, pulmonary angiography (Picture 1D) showed the defects in the bilateral upper lobes, due to to-and-fro flow of the truncus superior of the right pulmonary artery and reduced flow in the upper branches of the left pulmonary artery. Further, right heart catheterization...
demonstrated that the oxygen saturation was 100% in an upper branch of the left pulmonary artery, while it was 75% in the left descending pulmonary artery, suggesting that the upper lungs were supplied mainly by the shunt flow that caused the partial lung edema. The multiplicity of the fistulas made endovascular or surgical intervention difficult. He was treated conservatively and discharged with partial improvement of his symptoms.

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