Coronary-Bronchial Collaterals in Chronic Thromboembolic Pulmonary Hypertension

Caio Julio Cesar dos Santos Fernandes*, Monique S Pessi, Ellen Pierre de Oliveira, Daniela Calderaro and Rogerio de Souza

Pulmonary Hypertension Unit, Pulmonary Department-Heart Institute, University of Sao Paulo Medical School, Brazil

*Corresponding author: Caio Julio Cesar dos Santos Fernandes, Pulmonary Hypertension Unit, Pulmonary Department - Heart Institute, University of Sao Paulo Medical School, Av Dr Eneas de Carvalho Aguiar, 44 Sao Paulo, Brazil, Tel: +55-11-26-61-56-95, Fax: +55-11-26-61-56-95

Introduction

Chronic thromboembolic pulmonary hypertension (CTEPH) is a form of hypertension pulmonary due to a mechanical obstruction of pulmonary arteries, which is caused by organized fibrotic thrombi. Consequences of pulmonary artery obstruction are an increase in pulmonary vascular resistance with pulmonary hypertension and heart failure [1].

The main chest CT findings in CTEPH are the artery pulmonary enlargement and failure fill branches. Since there is a network of anastomotic channels linking the pulmonary and bronchial circulation, the bronchi-

Figure 1: CT scan showing signs of CTEPH associated with marked bronchial arteries dilation.
Figure 2: Coronary angiography showing collaterals between the right coronary artery and bronchial circulation.

Conclusion

Chronic thromboembolic pulmonary hypertension (CTEPH) is a unique form of pulmonary hypertension which the main therapeutic option in CTEPH is pulmonary endarterectomy (PEA), a surgery that removes the occluding material of pulmonary vessels, as well as the vascular endothelium. Coronary-bronchial fistulas have been described in CTEPH and can account for 30% of the systemic blood flow, but are not a frequent finding. In this case, collaterals were so relevant that they induced myocardial ischemia during a cardiac nuclear scan. Recognition of such vascular abnormality is important for appropriate surgical planning, in which PEA can be considered together with coronary revascularization.

References