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Abstract 35: Pulmonary Artery Calcification in Eisenmenger Syndrome and Pulmonary Arterial Hypertension (ES-PAH): Correlation with Clinical Outcomes



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Introduction: Pulmonary artery (PA) calcification is a well-documented radiological finding in patients with severe Pulmonary Arterial Hypertension (PAH) and is most common in Eisenmenger Syndrome (ES). The aim of this study was to evaluate the prognostic implications of PA calcification in the ES cohort.

Methods: A single-centre retrospective analysis of CT scans in ES patients was performed. The presence of PA calcification, and the distance of the most distal calcification from the pulmonary bifurcation was measured on curved planar reformatted images. The relationship of these two features with patient mortality and serum Brain Natriuretic Peptide (BNP) levels was assessed.

Results: A total of 104 patients were included (39 male, median age 33 [Range 14–69]). PA calcification was present in 29 (28%). During a median follow-up of 10 years from the index CT, 22 (21%) patients died. The distance of the most distal calcification from the pulmonary artery bifurcation significantly correlated with serum BNP (Spearman's $Rho = 0.5$, $p = 0.03$), which in turn correlated inversely with days from scan to death (Spearman's $Rho = -0.7$, $p = 0.02$).

Conclusions: The distal extent of PA calcification correlates with severity of PAH as suggested by serum BNP, and may represent a simple imaging predictor of worse outcome in patients with Eisenmenger-PAH.

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