Abstract: P2768

Post-PE impairment is mostly related to newly diagnosed heart failure with preserved ejection fraction

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Introduction: Recently, the concept of post-PE impairment (PPEI) was proposed which includes various combinations of functional, haemodynamic or imaging abnormalities in patients after acute pulmonary embolism (PE). Chronic residual obstruction of pulmonary vascular bed, despite adequate anticoagulation, is suggested to be a major cause of PPEI.

Material and Methods:

We report data of consecutive 700 PE survivors (390 F, aged 62 ± 18 yrs). In all patients PE was diagnosed and treated according to ESC recommendations. Patients were anticoagulated and followed for at least 6 months in outpatient clinic (median 6, 6-18 months). All symptomatic subjects underwent detailed diagnostic workup which included standardized echocardiography, lung scintigraphy, pulmonary functional tests, and chest CT, RHC and coronary angiography when appropriate.

Results: 207/700 (29,6%) of PE survivors completely recovered functionally. However, when compared to prePEperiod 493/700 (70,4%) patients reported functional limitation compatible with PPEI. Exertional dyspnoea was present in 36,5% of symptomatic patients, then 25,5% others presented effort angina with or without dyspnoea, 11% of symptomatic patients reported palpitations and 27% complained of reduced exercise tolerance.

After diagnostic workup, CTEPH was diagnosed in 38 of 493 (7,7%) symptomatic subjects (5,4% of all survivors) and chronic thromboembolic pulmonary disease (CTED) in 12/493 (2,4%) of them. 52,9% pts have chronic heart failure with reduced ejection fraction (EF) 4,2% and 37,2% with preserved EF; valve heart disease was detected in 8,9% and significant arrhythmia, mostly atrial fibrillation, in 2,6%. Breathlessness and reduce exercise tolerance in the others were caused by coronary artery diseases or non-cardiovascular pathologies (e.g. anaemia, pulmonary disease).

Conclusions: Follow-up demonstrated that after an episode of PE, approximately 70% of patients report functional impairment. Although persistent pulmonary artery thromboemboli resulting in CTEPH or CTED were detected in 7,1% of PE survivors and 10% of symptomatic patients. Left ventricular diastolic dysfunction is the most common cause of PPEI.