

Review of: "Relevance of Cor Pulmonale in COPD With and Without Pulmonary Hypertension: A Retrospective Cohort Study"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

This study is interesting and offers much food for thought about COPD patients both in presence and absence of pulmonary hypertension (PH). It evaluates the relevance of cor pulmonale in COPD patients both in presence and in absence of PH.

The presence of cor pulmonale was assessed by echocardiography by evaluating RV-PA uncoupling as the ratio of tricuspid annular plane systolic excursion and PASP (pulmonary artery systolic pressure) and by the finding of decreased exercise capacity: reduced 6 minwalk distance (6MWD).

The results of this study show that disease severity in COPD and survival in PH-COPD are predicted by evidence of cor pulmonale rather than by the severity of PH or other risk scores used in PH research.

In COPD without PH the importance of TAPSE-PASP ratio correlated well with specific lung function parameters and 6MWD. In PH-COPD TAPSE-PASP ratio was an independent predictor of mortality, whereas the severity of PH alone was not prognostic. Particularly among patients with the lowest values of TAPSE-PASP ratio and 6MWD those with targeted PH therapy had higher survival.

Thus this study, besides to confirm the importance of TAPSE-PASP ratio has allowed to understand why, so far, all therapies that aim to decrease PAP haven't succeeded in improving prognosis in patients with PH-COPD. The main limitations of this study is that it was conducted in a single centre and so this population can't be considered representative of the wider population with COPD. Furthermore the generalizability of the results is affected by various referral bias as an example only few patients in the high-risk group did not receive targeted PH therapies so conclusions about the efficacy of PH therapies cannot be drawn. Overall this study has drawn attention to the fact that cor pulmonale plays an important role in patients with COPD furthermore further studies are needed to demonstrate the effects of targeted PH-therapies in patients with PH-COPD and very low TAPSE-PASP ratio and 6MWD indeed in this study in this sub-group of patients those with targeted PH therapy had higher survival.