

Right Heart Function in Community-Acquired Pneumonia



To the Editor

We read with interest the recently published article by Dr Boczar and colleagues [1]. They evaluated changes in right ventricular function in 19 adult survivors of community-acquired pneumonia (CAP) from the time of acute infection to resolution. Right heart function was assessed by right atrial area, right ventricular fractional area change, tricuspid annular S' velocity, early (E) to late (A) right ventricular filling velocities (E/A ratio), and right ventricular myocardial performance index. The authors found no significant change in any of these indices from the acute to convalescent stage of CAP.

Community-acquired pneumonia is a leading cause for hospital admission and is associated with substantial morbidity and mortality [2]. Risk stratification is one of the key management issues in these patients. Although recent studies showed that cardiac complications are common in patients with CAP and associated with more severe disease, the prevalence of myocardial dysfunction and its relation with outcome is unclear. N-terminal probrain natriuretic peptide (NT-proBNP) is a neurohumoral marker for left and right ventricular dysfunction secreted by the heart in response to myocardial stretch caused by volume overload. Elevated levels of natriuretic peptides are reported to be common and are associated with a higher risk of adverse outcomes in CAP [3].

In addition to biomarkers some echocardiographic markers have been evaluated as possible predictors of prognosis in patients with CAP. We have very recently shown that patients with CAP had significantly higher NT-proBNP levels and lower tricuspid annular plane systolic excursion (TAPSE), which is an excellent measure of right ventricular systolic function [4]. We have also shown that the addition of TAPSE to NT-proBNP provided incremental prognostic value, and patients with CAP who had concomitant elevations of NT-proBNP and impaired right ventricular systolic function as estimated by TAPSE were at particularly high

risk for adverse outcomes [5]. Therefore, discrepancies between our results and those of Boczar et al. [1] should be carefully evaluated. Further research with more patients is needed to determine the prognostic significance of right heart function in patients with CAP.

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