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Titel des Beitrags: Sleep disordered breathing and enlargement of the right heart after myocardial infarction.

Abstract: Structural and functional integrity of the right heart is important in the prognosis after acute myocardial infarction (AMI). The objective of this study was to assess the impact of sleep disordered breathing (SDB) on structure and function of the right heart early after AMI. 54 patients underwent cardiovascular magnetic resonance 3-5 days and 12 weeks after AMI, and were stratified according to the presence of SDB, defined as an apnoea-hypopnoea index of >= 15 events · h(-1). 12 weeks after AMI, end-diastolic volume of the right ventricle had increased significantly in patients with SDB (n=27) versus those without (n=25) (mean ± sd 14 ± 23% versus 0 ± 17%, p=0.020). Multivariable linear regression analysis accounting for age, sex, body mass index, smoking, left ventricular mass and left ventricular end-systolic volume showed that the apnoea-hypopnoea index was significantly associated with right ventricular end-diastolic volume (B-coefficient 0.315 (95% CI 0.013-0.617); p=0.041). From baseline to 12 weeks, right atrial diastolic area increased more in patients with SDB (2.9 ± 3.7 cm(2) versus 1.0 ± 2.4 cm(2), p=0.038; when adjusted for left ventricular end systolic volume, p=0.166). SDB diagnosed shortly after AMI predicts an increase of right ventricular end-diastolic volume and
possibly right atrial area within the following 12 weeks. Thus, SDB may contribute to enlargement of the right heart after AMI.