

Worse LV global longitudinal strain for STEMI with COPD

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(HealthDay)—For patients with ST-segment elevation myocardial

infarction (STEMI), those with chronic obstructive pulmonary disease (COPD) have significantly more impaired left ventricular (LV) global longitudinal strain (GLS), according to a study published in the Sept. 1 issue of *The American Journal of Cardiology*.

Laurien Goedemans, M.D., from the Leiden University Medical Center in the Netherlands, and colleagues used advanced two-dimensional speckle tracking echocardiography to compare STEMI patients with versus without COPD in terms of infarct size and LV systolic function. A total of 1,750 patients with STEMI were enrolled, of whom 7.6 percent had COPD. Left ventricular ejection fraction (LVEF) and wall motion score index were measured; biomarkers were used to assess infarct size. LV GLS was measured with two-dimensional speckle tracking.

The researchers found that based on peak levels of creatine kinase (1,315 versus 1,477 U/L; $P = 0.106$) and troponin T (3.3 versus 3.9 $\mu\text{g/L}$; $P = 0.489$), there were no differences in infarct size. Comparable LVEF (46 versus 47 percent; $P = 0.591$) and wall motion score index (1.38 versus 1.38; $P = 0.690$) were observed. Compared to patients without COPD, patients with COPD had significantly more impaired LV GLS (-13.9 ± 3.0 percent versus 14.7 ± 3.9 percent; $P = 0.034$).

"Patients with COPD exhibit more impaired LV GLS on advanced echocardiography than [patients](#) without COPD, suggesting a greater functional impairment at an early stage after STEMI," the authors write.

One author and the Department of Cardiology at the Leiden University Medical Center disclosed financial ties to the pharmaceutical and medical device industries.

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