McConnell’s Sign in Right Ventricular Infarction: Looking Closer at the Ventricular Ratio

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Abstract

The sonographic finding of a McConnell’s sign, defined as right ventricle (RV) hypokinesis with apical sparing, has been described in the setting of pulmonary embolism (PE) and RV infarction. Patients with PE and RV infarction can have similar clinical presentations, and a rapid way to discriminate between these etiologies may improve care for these critical patients. While a McConnell’s sign due to PE typically results in a right-to-left ventricle ratio of ≥1, we observed three cases of a McConnell’s sign due to RV infarction resulting in a right-to-left ventricle ratio of <1. One patient expired after their electrocardiogram demonstrated an inferior myocardial infarction, and two patients survived with stenting of the right coronary artery. In addition to the McConnell’s sign, the RV was smaller than the LV in all three patients. Emergency physicians should be aware that RV infarctions can present with a McConnell’s sign demonstrating an RV-to-LV ratio <1. We propose this ratio may help to distinguish an RV infarction from PE in the undifferentiated patient with McConnell’s sign. Given the rarity and higher mortality of RV infarction relative to PE, it is important to consider both diagnoses when performing cardiac PoCUS on critical patients.

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