Stress Testing in the Emergency Department: Not Which Test but Whether Any Test Should Be Done

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Chest pain is one of the most challenging symptoms for emergency medicine physicians to evaluate. They must identify patients with cardiac ischemia without subjecting all patients, the overwhelming majority of whom do not have ischemia, to unnecessary testing. Most patients evaluated in the emergency department (ED) for chest pain who have normal electrocardiogram findings and negative results of cardiac biomarker tests do not have cardiac ischemia. Thus, the question should not be what further testing to perform, but should any further testing be done in the ED.

The study by Foy et al1 in this issue of JAMA Internal Medicine sheds much light on this question. They found that, after more than 6 months of follow-up, only 0.33% of all patients who received treatment for chest pain in the ED were hospitalized with a myocardial infarction. Even more important, this very low risk was the same in patients who underwent cardiac testing (exercise electrocardiography, stress echocardiography, myocardial perfusion scintigraphy, or coronary computed tomographic angiography) compared with those who did not undergo testing. These findings suggest that the current practice of performing a stress test on low-risk patients in the ED is unnecessary and prolongs the length of stay in EDs as well as increases unnecessary medical imaging, with a significant associated radiation risk for tests that include nuclear imaging. It is time to change our guidelines and practice for treatment of chest pain in low-risk patients. Such patients should be given a close follow-up appointment with a primary care physician who can determine, based on the patient’s condition, whether further evaluation is necessary.

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