tion (TIMI) score of 0 holds promise to further advance our management of low-risk patients. In the current state of our knowledge, it is reasonable to call for a halt to routine cardiac testing in favor of physician discretion in selection of patients for predischarge testing.

Routine use of CTA in low-risk patients with chest pain is questionable and warrants specific attention. Despite a negative predictive value of more than 99%, decreased LOS, and lower upfront ED costs in fully capable units, this method has considerable drawbacks. These include ionizing radiation with its potential for future risk of cancer and a suboptimal positive predictive value that can promote follow-up invasive coronary angiography, additional radiation exposure, and use of nephrotoxic radiographic contrast medium, plus allergic reactions. Of importance, CTA is associated with elevated rates of invasive angiography and subsequent increases in revascularization, with the potential for increased downstream costs and no evidence of clinical benefit compared with usual care.

In this regard, it is important to appreciate that even when testing does reveal coronary artery disease, a causal relationship cannot be inferred between symptom and disease. Computed tomographic coronary angiography is a remarkable tool, but clearly it should be reserved for selected patients among the low-risk group presenting to the ED with chest pain.

At the University of California, Davis, Medical Center in Sacramento, we practice physician discretion in selecting patients for predischarge testing. In more than 500 patients discharged directly from the unit after evaluation consisting of normal results of electrocardiograms and cardiac troponin tests, there has been only 1 adverse cardiac event (0.2%) at the 30-day follow-up. Thus, low risk is not no risk, and the crucial aspects of this strategy remain meticulous clinical history and examination, accurate electrocardiographic interpretation, and reliable and contemporary assay for cardiac troponin. The extent to which this concept will reduce the burden of unnecessary testing of low-risk patients will depend on each institution’s patient mix, the readiness of clinicians steeped in the hazards of missed acute coronary syndromes to adopt new and reasonable algorithms, and the interests and influences on clinical care at their institutions.

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REFERENCES


Editor’s Note

Priorities in the Evaluation of Patients With Chest Pain

Rita F. Redberg, MD, MSc

The excellent article by Safavi et al and commentary by Amsterdam and Aman remind us that the first question in evaluation of patients with chest pain who are at low risk for myocardial infarction is not “What test should I order?” but rather “Does this patient need any further testing?” Many patients can be safely discharged from the emergency department to outpatient follow-up without any stress test or imaging such as cardiac computed tomography. Certainly, no one wants to miss a myocardial infarction, but we also do not want to keep people for hours and days to perform additional imaging tests that are not associated with better outcomes but may lead to increased radiation exposure. More time spent talking with patients about their symptoms and their functional status, as well as the risks and benefits of immediate vs deferred testing, is likely to result in shorter emergency department stays and fewer unnecessary tests.