tctMD/the heart beat

NEWS • INTERVENTIONAL

High-Sensitivity Troponin T Assay Picks Out Low-Risk Patients in US Emergency Departments

Assays like this are potential game changers, but they should be implemented carefully in the United States, one expert says.

By Todd Neale December 14, 2017

The only US Food and Drug Administration (FDA)-approved high-sensitivity cardiac troponin T assay is able to accurately rule out acute MI in patients presenting to the emergency department with suspected ACS and can identify a subset with a very low rate of adverse cardiac events over the next 30 days, according to the first such analysis performed in the United States.

Test results below the 99th percentile on the fifth-generation Elecsys Troponin T STAT assay (Roche) at both presentation and 3

hours later ruled out acute MI with a negative predictive value of 99.2% and 30-day events with a negative predictive value of 99.3%, researchers led by W. Frank Peacock, MD (Baylor College of Medicine, Houston, TX), report in a study published online December 13, 2017, ahead of print in JAMA Cardiology.

Slightly more than three-quarters of patients would have been ruled out solely based on the assay results at presentation and 3 hours.

“We have a good large trial [showing] that if you have access to this assay, you have a strategy now that you can send most of the people from your emergency department home,” Peacock told TCTMD. “They do not need to be sitting in your ER or in the hospital catching diseases. They can go home and then [be] followed up as an outpatient. That is the practice-changing consequence of this trial.”

> **“Exposing people to hospitals, charging them extra money because we have crappy troponins in the United States, is what we’ve been doing for years.”**
>
> **W. FRANK PEACOCK**

Currently, he pointed out, hospitals without access to high-sensitivity troponin assays often will admit patients with suspected ACS for further testing and then discharge them the next day. “Exposing people to hospitals, charging them extra money because we have crappy troponins in the United States, is what we’ve been doing for years,” he said, adding that now, “We’ve changed the game.”

Coming to America

High-sensitivity troponin assays have been available for years in many parts of the world, but the FDA waited until the beginning of this year to allow the first one to be marketed in the United States. Roche’s fifth-generation troponin T assay remains the only high-sensitivity assay available to American clinicians.

Peacock said the FDA balked at approving high-sensitivity assays because it was overly concerned about false-positives, and the result was substandard troponin testing in US emergency departments. “You can go to any third-world country and get a