SOUTHWESTERN NEWS

Contact: Emily Martinez
(214) 648-3404
or e-mail: emart2@mednet.swmed.edu

NEW DIAGNOSTIC TEST VIEWED AS MAJOR ADVANCE IN CHEST-PAIN EVALUATION

DALLAS — June 27, 1996 — UT Southwestern Medical Center at Dallas pathologists are among the first researchers in the country to use a newly developed biochemical marker that reduces the time and improves the accuracy of diagnosing a heart attack.

"All in all," said Dr. Joseph Keffer, a professor of pathology involved in the research prior to its Food and Drug Administration approval last summer, "this test is a revolution in medical diagnosis."

UT Southwestern was a clinical test site for the new marker, troponin I, and Keffer said only a handful, if any, additional North Texas hospitals currently have started using the test. He expects more medical centers to adopt the technology rapidly. Keffer presented a set of practice guidelines for biochemical markers to hospitals across the nation via a teleconference in May.

Markers are molecules that leak from the heart into the blood when a heart attack occurs. Conventional tests, such as electrophoresis, long used in hospitals, may take as long as 10 to 12 hours to recognize a definite rise in the level of blood enzymes caused by cardiac arrest, while troponin may be detected in one to two hours after the patient arrives in the emergency room.

"The cardiac troponin I test is the most notable of the new array of tests for myocardial information," Keffer said. "There is no question about this, and evidence continues to build in support of this assertion."

Time is critical in preventing damage to the heart muscle. Keffer said the new marker also appears to be more accurate than other tests. "While at times the diagnosis of myocardial infarction may be obvious, in other cases it is very difficult to diagnose and covers the spectrum from minimal injury to fatal and massive heart attack," Keffer said. "This marker differs from others because the protein that is measured by the test is unique to the heart muscle. Consequently, whenever it is found in the blood, it is clear evidence of some type of heart-muscle problem."

(MORE)

When a patient arrives at an emergency room complaining of chest pain or other discomfort that might signal a heart attack, the physician asks the patient a number of specific questions and begins running a series of tests. Blood that is drawn and sent to the clinical laboratory is analyzed by pathologists.

The new test will benefit a large number of people, Keffer said, most notably individuals who might otherwise be sent home from the emergency room while they are experiencing an undiagnosed heart attack. "The national figures show that from 3 percent to 10 percent of patients who come to emergency rooms experiencing heart attacks are sent home undiagnosed," he said.

The marker will make the biggest difference for patients who do not have a classic variety of chest pain or heart-beat measurements associated with a heart attack. Approximately half of all patients may fit into this category, Keffer said.

Keffer said the missed diagnosis of a heart attack is the largest cause of malpractice payments in emergency medicine. And, he said, billions of dollars are spent annually on unnecessary admissions of patients to rule out heart attacks. "These incorrect diagnoses can be reduced substantially by the appropriate use of troponin testing," he said.

In a testimony to the value of the test, investigators at Brigham and Women's Hospital in Boston recently reported a 7 percent to 10 percent risk of death or new myocardial infarction for each increment of troponin I in the blood of patients with chest pain. Risk stratification using this test identified those patients who ultimately benefitted from urgently performed angioplasty or thrombolytic therapy.

At UT Southwestern-affiliated hospitals, patients suspected of perioperative infarction routinely are tested with troponin I.

###

This news release is available on The UT Southwestern World Wide Web home page at
http://www.swmed.edu/news/newspubs.htm