

YRMC One of First Arizona Hospitals to Offer Platelet Function Testing

In 2007, when Yavapai Regional Medical Center (YRMC) first began performing heart surgery, a new device to test platelet function was introduced. YRMC was among the first in Arizona to offer patients the simple yet significant test.

“Even today, not all hospitals provide patients this test,” said Pierre R. Tibi, MD, FACS, medical director, Cardiothoracic Surgery at The James Family Heart Center at YRMC West. “Platelet function testing provides critical information about the effectiveness of anti-platelet agents and helps us determine when it’s safest for the patient to undergo surgery.”

Physicians often prescribe anti-platelet agents—aspirin and other prescription medications—to patients following heart attack or stroke. People with certain heart or blood vessel disorders also may take anti-platelet agents. These medications stop the platelets in the blood from forming unwanted clots, which have the potential to cause heart attack or stroke. Prior to surgery, patients stop taking aspirin and other anti-platelet agents as they could lead to excessive bleeding during the operation.

“For most people, their anti-platelet medications are out of their system within five days of stopping the medication,” Dr. Tibi said. “However, about 20 percent of people still will have the medication working in their system after five days.”

According to Dr. Tibi, these patients could require multiple transfusions during surgery, which also would make them prone to complications following surgery.

“Platelet functioning testing tells us when the patient’s clotting ability has returned and when he can undergo surgery,” said Dr. Tibi.

At YRMC, platelet function testing is typically used to:

- screen patients to assess the ability of their blood to clot during heart or other invasive surgeries; and
- determine if patients’ anti-platelet therapy is working.

Platelet function testing is simple and fast. A patient’s blood sample is run through a piece of equipment about the size of a desktop telephone. The results provide the physician with information on the effects of various drugs on the platelets and their ability to function.

“This is important information for patients who are taking aspirin or other anti-platelet medications, and for the physicians and surgeons who care for them,” Dr. Tibi said. “First, it allows the patient and his or her doctor to measure the effectiveness of the therapy. Second, if the patient is undergoing an invasive procedure, platelet function testing can gauge the blood’s ability to clot for the surgeon.”