TO YOUR HEART!

TO CATH OR NOT TO CATH... THAT IS THE QUESTION

By: Narendra Singh MD

Without a doubt one of the most powerful tools in cardiology is the heart catheterization (often called a cardiac angiogram). This involves advancing a very small flexible tube directly into the heart chambers and the blood vessels that supply the heart. This then enables us to get accurate pressure measurements in each of the heart chambers, assess the pumping function of the heart, identify any congenital abnormalities and most importantly determine the amount of plaque build up in the blood vessels supplying the heart. There are two main blood vessels to the heart –the RCA (right coronary artery) and the left main artery that quickly branches into the LAD (left anterior descending) and the LCX (left circumflex).

The heart cath is an invasive test and has rare but significant risks that must be weighed against the information gathered. Information from a cath can determine the need for new medications, open heart surgery, coronary artery bypass operation, valve repair or replacement and most often the need for a balloon and stent procedure.

In the past, heart caths were mainly done by accessing an artery in the leg (femoral approach). This led to the need for prolonged bed rest. Today many cardiologists can do the procedure through the wrist (radial approach)! Not only does this allow the patient to mobilize sooner but it results in less complications especially bleeding post procedure.

So who should get a heart catheterization? There is little doubt that if you are in the midst of a heart attack going directly to the cath lab is the best treatment option. Rapidly clearing a blockage with a combination of blood thinners and a stent can be life saving!

Most often however heart caths are done as an outpatient procedure in an elective setting. This should be considered if you have a stress test that suggest significant blockages, especially if your chest pain symptoms cannot be controlled with medications. Sometimes a heart cath is recommended because of ongoing chest pain for which no other explanation can be found. A heart cath may also be advisable if you have evidence of heart muscle damage or severe heart valve problems. A right heart cath is often needed to guide therapy for advanced lung disease.

Of course nobody likes the idea of having tubes advanced to the heart if its not needed. So what are some alternatives? There are at least four options to consider with your doctor.

A nuclear stress test, using a radioactive tracer can often identify if a blockage involves a small or large area of the heart. Small areas at risk can often be managed just with medications.

A CT angiogram give great pictures of the heart and blood vessels through a simple intravenous needle. The test, however, results in greater radiation exposure and greater contrast dye load. It is best done when the coronaries are expected to be normal otherwise you end up getting the heart cath anyways for a stent.

A calcium score is a simple and very useful test when the goal is to identify if there is early plaque buildup. It does not require any needles but also cant tell you how tight a blockage is.

Finally, an MRI often gives the best pictures but the test is expensive, the equipment is not readily available and patients often feel claustrophobic. It is best used to identify congenital abnormalities, aneurysm of the aorta or unusual finding on other tests.

Always consult with your cardiologist about the best option for you!■

Narendra Singh MD FRCPC FACC FAHA, is a Clinical Assistant Professor, Georgia Regents University in Augusta, and the Director-Clinical Research, Atlanta Heart Specialists, LLC. Dr. Singh studied at the Dalhouse Medical School in Halifax, Nova Scotia and went on to complete a residency and cardiology fellowship at the University of Toronto. He may be reached at 678.679.6800.