Researchers find common test may be unnecessary for bariatric surgery candidates

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A new study by researchers from Rhode Island Hospital has found that stress testing with myocardial perfusion imaging as part of a pre-operative workup for bariatric surgery candidates may be unnecessary. The research is published in the *Journal of Nuclear Cardiology*, and is now available online in advance of print.

Obesity is considered to be an epidemic in the United States, with more than two-thirds of the adult population overweight, and half of those adults are obese. Severe obesity is considered a chronic disease due to its potential to cause serious and potentially life-threatening health consequences. While the best approach to treatment of obesity is yet to be determined, bariatric surgery has been found to be safe and effective in reducing some of the complications associated with obesity.

For bariatric surgery candidates, many are screened for cardiovascular disease prior to surgery because of the high prevalence of coronary artery disease (CAD) risk factors in this population, along with the presence of underlying functional limitations, which may make assessment of CAD symptoms difficult. A common tool used for this is stress testing with myocardial perfusion imaging (MPI). The incidence, however, of clinically significant abnormalities identified through stress MPI performed for this indication has not yet been established.

In order to determine whether this test is needed and should be considered a necessary part of the bariatric surgery workup, a James Arrighi, M.D., a cardiologist with Rhode Island Hospital, led a study of

383 consecutive stress MPI studies performed on patients undergoing workup prior to planned bariatric surgery. The mean age of the population was 42, 83 percent female and a [body mass index](link) of 49 (+/- 8).

Arrighi and his team reported several important findings in this study. First, 67 percent of patients underwent stress-only imaging, despite the fact that [overweight patients](link) are often difficult to image. Stress-only imaging significantly reduces the time required, radiation exposure, and cost associated with the test. Second, the study findings show that the incidence of abnormal MPI studies was low, and associated with a very low incidence of death or cardiac events at one-year follow-up, with less than 1 percent incidence of death from all causes or incidence of coronary revascularization, and there were no myocardial infarctions. Third, the perioperative cardiovascular events were extremely low, despite the high prevalence of risk factors for [coronary artery disease](link).

Arrighi says, "Overall SPECT MPI findings were normal in 89 percent and equivocal in six percent of the patients. The incidence of abnormal findings on MPI was only 5 percent. While stress testing in this patient population has been a relatively common practice with good cause, the findings of this study suggest that these tests may not be indicated in all patients."

He concludes, "The results of our study suggest that this patient population is actually at very low risk for cardiovascular events, and if this is indeed the case, the routine preoperative stress testing with MPI for the detection of CAD may be unlikely to affect outcome. Additional studies are needed, however, to determine how higher-risk patients should be selected for pre-operative noninvasive risk stratification."

Provided by Lifespan

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