



Congenital Cardiology Solutions

FUNCTIONAL ASSESSMENT BY STRESS EXERCISE IN PATIENTS WITH ANOMALOUS AORTIC ORIGIN OF A CORONARY ARTERY: EXPERIENCE OVER 17 YEARS

Moderated Poster Contributions

Poster Sessions, Expo North

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Authors: *Silvana M. Lawrence, Carlos M. Mery, Muhammad S. Khan, Amanda L. Tate, Diane W. Chen, Rajesh Krishnamurthy, Charles D. Fraser, Baylor College of Medicine, Houston, TX, USA, Texas Children's Hospital, Houston, TX, USA*

Background: Anomalous aortic origin of coronary arteries (AAOCA) is the second most common cause of sudden cardiac death in young athletes and remains a challenging diagnosis with variable clinical and surgical approaches to management. We sought to review our 17-year institutional experience with functional assessment of these patients using stress exercise test.

Methods: Retrospective review of functional assessment by stress exercise, with or without myocardial perfusion, in patients with diagnosis of AAOCA and no other associated major congenital heart defects at our institution from 1995-2012.

Results: A total of 55 patients with AAOCA were identified, 36% female. Stress exercise test was performed in 27 (49%) and myocardial perfusion test (SESTAMIBI) in 14 (25%). ST-T changes were identified in 2 (7.4%) of 27 patients (one underwent surgery) and 3 (11%) had arrhythmias (SVT, second degree AV block and RBBB) during stress test. Of the 16 (29%) patients who underwent surgical intervention, 7 (44%) had SESTAMIBI performed, only one had perfusion abnormalities (anomalous right CA from the left). Of the 39 (71%) patients followed clinically, 7 (18%) had SESTAMIBI performed and only one had perfusion abnormalities (anomalous left CA from the right). All patients had normal systolic function by echocardiography. Follow up stress test was performed in 8 (50%) who underwent surgery (one with ST-T changes) and in 14 (36%) who were followed clinically (all normal). The presence of symptoms did not relate to abnormal findings on stress test. Patients continued to report symptoms after surgery, but no significant ischemic changes were identified on those who underwent functional assessment. Upon median follow up of 2 years, all patients remain alive with no major reported cardiac events.

Conclusions: Functional assessment by stress test with or without myocardial perfusion in patients with AAOCA has a low yield for positive

Results: Management strategies vary even within a single institution. A better understanding of the natural history of AAOCA in the young population and improved surrogate markers of risk are needed to help devise risk stratification and treatment algorithms in these patients.