

**The role of Dipyridamole stress echocardiography in the diagnosis of coronary pathology after the arterial switch operation for Transposition of the great arteries**

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**Objectives** To evaluate Dipyridamole stress echocardiography (DSE) as a diagnostic tool in paediatric patients with Transposition of the great arteries (TGA) treated with arterial switch operation (ASO), and to test its accuracy in screening myocardial ischemia.

**Methods** One-hundred consecutive patients (mean age  $5 \pm 3,8$  years, range 3 months -21 years; mean weight  $21 \pm 13$  Kg, range 5,6-89 Kg) with TGA (71 simple TGA, 25 TGA and VSD and 11 DORV-Taussig Bing type) and ASO, underwent DSE and selective coronary angiography,  $4,9 \pm 3,6$  years ( range 3 months-21 years ) after the intervention. Before the test, the history of perioperative ischemic events and the clinical/instrumental signs of ischemia at the time of the study were noted (pre-test evaluation). DSE was performed in the catheterization laboratory under general anaesthesia, and once it was completed was followed by coronary angiography.

**Results** DSE and coronary angiography were well tolerated without any complication. Dipyridamole provoked myocardial ischemia in 4% of patients and coronary stenosis were demonstrated in 5% of subjects. Two patients with coronary stenosis and no dipyridamole-inducible ischemia showed a well developed collateral circulation. In all pts with negative pre-test evaluation, no stress-ischemia and no angiographic coronary stenosis were detected.

**Conclusions** Dipyridamole stress echocardiography is feasible, safe and is a reliable marker for ischemia in children with Transposition of the great arteries after anatomical correction. It is unable to detect coronary abnormalities when collateral circulation fully compensates the coronary stenosis. Stress echocardiography is an important adjunctive tool in the management of patients with coronary abnormalities after the arterial switch operation.