LONG TERM FOLLOW-UP OF INTRAVASCULAR STENT PLACEMENT FOR ATRIAL BAFFLE STENOSIS AFTER MUSTARD REPAIR FOR TRANSPOSITION OF THE GREAT ARTERIES

Authors: Sheetal Patel, Daniel Turner, Thomas Forbes, Peter P. Karpawich, Children’s Hospital of Michigan, Detroit, MI

Background: Atrial baffle stenosis is a common complication after Mustard repair for D-Transposition of great arteries (d-TGA). This study describes our institutional experience with interventional treatment and long term follow up of the atrial baffle angioplasty.

Method: A review of all patients (pts) with d-TGA and Mustard repair undergoing baffle angioplasty from 1995-2008 was performed. History, catheterization (cath) reports and angiograms of the initial angioplasty and latest follow up cath were reviewed. Baffles with a mean pressure gradient > 4 mmHg or narrowing > 50% of the vena cava diameter were considered stenosed.

Results: 21 pts (age 9-32 mean 22.9 yrs; M/F=13/8) underwent initial stent placement to successfully relieve atrial baffle stenosis without any technical problems or complications. Baffles involved were SVC=19, IVC=2. Follow up cath was done in 17 pts at 1-10.5 yrs (mean 4.4) post stent, showing adequate baffle patency in 14 (82%). Re-stenosis in 3 pts required balloon angioplasty in two and placement of a second stent over a fractured stent in one. Mean pressure gradients pre-, post-angioplasty and at follow up were 6+5.9 mmHg, 1+1.6 mmHg and 2+1.9 mmHg respectively. Baffle diameters before and after stent placement and at the follow up for each patient are shown in the graph.

Discussion: Atrial baffle stenosis can be successfully and safely treated by catheter based interventions. However, significant narrowing of the stent lumen can still occur requiring re-intervention.