The role of interventional cardiology in the follow-up of TGA patients operated with Mustard technique

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Background
TGA patients operated with Mustard technique present stenosis and dehiscence of the atrial baffles in their evolution. These residual lesions can be adequately treated percutaneously.

Material and methods
Retrospective descriptive analysis of our experience in percutaneous treatment of baffle lesions after Mustard surgery.

Results
Between September 2006 and June 2016, 55 interventions were performed in 40 patients with Mustard surgery. Patients mean age was 26.9 years (SD 6.01), 60% (40) were males and mean weight was 66 Kg (SD 12.4). Indications for catheterization were: systemic baffle stenosis in 61.8% (34), dehiscence in 16.4% (9) and both lesions in 16.4% (9). Of all the stenosis, 11 patients (25.6%) presented a complete baffle obstruction (8 SVC baffle, 2 IVC baffle and 1 in both baffles). Nine (81.8%) complete obstructions were treated successfully; perforation of the obstruction was performed in 8 patients with the stiff part of a coronary wire and in 3 with radiofrequency. After recanalization a sequential dilation was performed with increasing size balloons and a stent was implanted. Of the 18 dehiscence 13 (72.2%) were treated successfully, 7 with covered CP stent, 5 with ASO and one with ADO. Fourteen patients (30.4%) carried an intravascular pacemaker at catheterization, in 9 of them a stent was implanted in the SVC baffle jailing the pacemaker cable (3/9 patients the cable dysfunctioned).

Median fluroscopy time was 32.5 minutes (IQR 23.93-51.90) and radiation dose 177 Gycm² (IQR 127.0-260.0), being the maximum 109 minutes and 923 Gycm² in a patient with complete obstruction. Complications were observed in 9 interventions: 2 cases of atrial flutter after setnt implantation in SVC, pacemaker cable dysfunction in 3 patients, 1 stent migration and other minor vascular complications. No patients deceased.

Conclusions
Percutaneous treatment of Mustard surgery lesions is feasible and secure, when they are performed in units with experience in treatment and follow-up of these patients.