

**Transposition of the great arteries with intact ventricular septum.
Arterial Switch Operation in patients one month of age or older.**

*Ly M., Garcia E., Kalfa D., Rousin R., Lebret E., Belli E.
Marie Lannelongue surgical center, Le plessis Robinson, France*

OBJECTIVE: Neonatal arterial switch operation (ASO) is the procedure of choice for the repair of transposition of the great arteries and intact ventricular septum (TGA-IVS). Classically, after 3 weeks old the ability of the Left ventricular (LV) to sustain a systemic output remains uncertain and LV retraining could be necessary.

The aim of this study was to review our experience with patients with TGA-IVS and late referral to surgery.

METHODS: Between 1993 and 2011, 78 patients with TGA-IVS older than 30 days old were referred to our institution for an ASO. The median age was 62 days (30 to 1070 days). Decision to perform a primary ASO was roughly based on the values of LV mass ≥ 35 g/m² and when between 25 and 35g/m² on the value of LV mass/volume ratio > 1.2 . Below these levels, a rapid two stage approach was favoured. Primary ASO was performed in 40 (Group I)(median age 43, 30 to 187 days) while 38 (Group II) (median age 112, 32 to 1070 days) underwent a rapid 2-stage (median delay 9days) management with initial pulmonary artery banding associated or not with a systemic to pulmonary shunt.

RESULTS: Overall mortality was 3, 8% (3/78). It was 5% in group I versus 2.6% in group II. Mechanical LV support was required in 2 patient of Group I versus 4 in group II. Patients in group II were older than in group I (145 versus 57 days, $p < 0.0001$). Mortality and post operative morbidity were not influenced by age, LV geometry, LV mass index, LV posterior wall thickness index, LV volume index, LV mass/volume ratio, patent arterial duct or patterns of coronary anatomy.

CONCLUSIONS: Despite late referral, and initially inadequate left ventricular quality, patients 30 days of age or older with TGA/IVS can successfully be treated with the arterial switch procedure, provided that the left ventricle is adequately prepared. Either primary ASO followed by mechanical LV support or rapid two stage approach are adequate managements which provide good results.