Background: Today in our environment, mitral valve replacement is used frequently by many surgeons in the treatment of the mitral disease. Surgeons prefer to replace instead of repairing it. This probably consequence of high incidence of the cases of "Rheumatic Fever", the low range of cases that have been and difficult learning curve subject that this.

Mitral valve reconstruction using standardized Carpentier techniques is the treatment of choice for most patients with regurgitation lesions. Demonstrated predictability and stability make it an attractive alternative to valve replacement. Recently we started experiencing with these techniques of repair mitral valve in our center.

Methods: Between September 2009 and September 2016, 46 consecutive patients underwent mitral valve reconstruction using standardized Carpentier techniques with Physio Ring (Edwards lifesciences) and CG Future Ring (Medtronic company). There were 28 men (59%) and 41 women (41%). Mean age was 52 years old (range 5 months and 84 years). The mitral valve etiology was degenerative in 30 (66%), endocarditis in 7 (14%), ischemic in 3 (6%), congenital and others in 6 (15%).

Graphics (1,2). Risk factors were: Atrial Fibrillation (AF) in 12 (26%), Pulmonary Hypertension in 22 patients (48%), mild 4 (8%), 1 patient (2%) with pericardial effusion without acute cardiac tamponade, stroke in 1 (2%), low cardiac output in 11 (23%), pneumonia in 3 (6%), effusions pleural in 7 (15%) and new onset of atrial fibrillation in 13 (28%). The average postoperative length of stay was 9 ± 6 days.

Results: There wasn’t isolated mitral reconstruction. With tricuspid repair with implant of ring in 28 (61%), with coronary bypass grafting in 2 (4%), with aortic valve replacement in 6 (13%), with radiofrequency (RF) energy left MAZE in 10 (22%).

Graphic (3). All patients had annuloplasty Physio ring and CG Future ring (100%).

Primary repair in 10 (21%), reconstruction de mitral annulus calcification (MAC) in 2 (4%), triangular leaflet resection in 19 (41%), quadrangular leaflet resection in 13 (28%), plastic commissural in 3 (6%), sliding in 4 (8%), neochord replacement with PTFE in 9 (19%), pericardial bovine patch in 5 (10%), Alfieri technique in 4 (8%), primary defect closed in 2 (4%). Table (1).


Table 2. Echocardiography (TEE) result after valve repair. Caracas Venezuela.

There wasn’t hospital mortality. There was a successful repair in 44 patients (95%), 2 mitral replacements. Mean bypass time was 123 minutes, mean cross-clamp time was 96 minutes. Table (2). Postoperative complication: reoperation for bleeding in 4 (8%), 1 patient (2%) with pericardial effusion without acute cardiac tamponade, stroke in 1 (2%), low cardiac output in 11 (23%), pneumonia in 3 (6%), effusions pleural in 7 (15%) and new onset of atrial fibrillation in 13 (28%).

The average postoperative length of stay was 9 ± 6 days. Postoperative echocardiography revealed: regurgitation 0+ in 41 patients (89%), 2+ in 5 (10%). Follow-up were collect for 40 patients (86%) discharged from the hospital. Table (3). The follow-ranged from 1 month to 60 months (mean,36 months). At the completion of follow-up, the actual survival of this series is 43 patients (93%). There was two late death. One for cardiac cause and the other no cardiac cause.

Conclusions: Mitral valve reconstruction in our novel center with few cases experience was accomplished with low morbidity hospital without mortality in combined procedures. These results, low incidence of reoperation, late cardiac events and improvement of symptoms in our patients, emphasize the importance of early treatment of the mitral regurgitation with techniques of mitral repair.