

THE CLINICAL RESULTS OF OPEN MITRAL COMMISSUROTOMY AND ANNULOPLASTY

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Gazi Medical Journal 3 : 113-115, 1993

SUMMARY : During the period from January 1987 until September 1993, 498 patients with mitral valve disease were operated at the Department of Cardiovascular Surgery, Gazi University Medical School. Of the 498 patients, 416 received prosthetic heart valves and 82 underwent reconstructive surgery including open mitral commissurotomy for 44 patients, commissurotomy with annuloplasty for 26 and annuloplasty for 12 patients. The age of the patients undergoing reconstructive mitral valve repair was ranging from 9 to 64 years with an average of 33.7 ± 4 years. 63 patients were female and 19 patients were male.

The early postoperative mortality was 4.87 ± 0.7 % (4 patients). 3 patients were suffering from mild mitral incompetence in the early postoperative period. The average postoperative follow-up of patients was carried out for a period of 30.4 ± 3 months which showed no late mortality among our patients. As a late morbidity, a moderate mitral incompetence was observed in 1 patient (1.2 %) and mitral restenosis in 2 patients (2.4 %).

Key Words : Open Mitral Commissurotomy, Mitral Valve Diseases.

INTRODUCTION

Rheumatic fever continues to be one of the most common health problems in our country and most of the cardiac operations are performed for rheumatic valvular lesions (2). Although many technological advances have become available in cardiac surgery; prosthetic valve-related complications, such as thromboembolism, hemolysis and degeneration have still been inevitable. Because of the expected complications mentioned above, valvuloplasty techniques and conservative valvular surgery have become widely accepted in many centers throughout the world (1, 4, 5).

In our retrospective study, surgical outcome in 82 patients who underwent reconstructive valvular

procedures over a period of about 7 years has been investigated and prognosis during the mean follow-up of 30.4 ± 3 patient months (1766 months) has been discussed.

MATERIALS AND METHODS

During the period from January 1987 until September 1993, 498 patients underwent operations for mitral valve disease. 416 patients received prosthetic heart valves and reconstruction surgery techniques were performed for the rest 82 patients (16.4 %). The age of the patients undergoing reconstructive surgery was ranging from 9 to 64 years with an average of 33.7 ± 4 years. 63 of these patients were female and 19 were male. Preoperatively, 26 patients were evaluated to be in Class II, 42 pati-

ents in Class III, and the remaining 14 patients in Class IV according to the NYHA classification. 46 patients had pure mitral stenosis, 22 patients mitral stenosis and mitral regurgitation and 14 patients pure mitral regurgitation. 32 patients (39 %) had another coexisting pathology. The rhythm of 32 patients was sinus and 50 patients atrial fibrillation, preoperatively.

Operations were performed on standard cardiopulmonary bypass procedure under 30-32°C of hypothermia. Myocardial protection was done with crystalloid potassium cardioplegia and topical cooling.

44 patients underwent commissurotomy (16 commissurotomy with the division of papillary muscles), 26 commissurotomy with Kay annuloplasty, 5 single Kay annuloplasty, and the remaining 7 received Puig Massana Shiley ring annuloplasty.

Among the patients having another coexisting pathology, 10 patients underwent De Vega tricuspid plasty, 12 received prosthetic aortic valve replacement, 8 received prosthetic aortic valve replacement with De Vega tricuspid plasty, 2 patients underwent additional coronary artery bypass grafting.

The mean aortic clamp time was 33.7 ± 6 min. and the mean cardiopulmonary bypass time was 66.6 ± 7 min.

All of patients were discharged on 7th postoperative day without any complication. It is our routine not to anticoagulate patients who received reconstructive surgery, but they have been advised to continue on dipyridamole and acetyl salicylic acid for anti-aggregant therapy.

The mean follow-up was 30.4 ± 3 patient months (1766 months) and the percentage of the follow-up rate was 70.5 % (55 patients).

RESULTS

The early postoperative mortality (1-30 days) was 4.87 ± 0.7 % (4 patients). 3 patients died because of low cardiac output, 1 because of mediastinitis. Mitral valve insufficiency of grade II was observed in three patients echocardiographically, in the early postoperative period. The evaluation of other patients were totally normal either by doppler echocardiography or on physical examination. The cardiac rhythm of 32 patients were atrial fibrillation, 49 sinus and 1 patient nodal. As it can be noticed, the

rhythm of 17 patients (20.7 %) became sinus in the early postoperative period.

In the late follow-up, two patients underwent reoperations for restenosis in the third and fourth years, and one for mitral valve regurgitation over grade II in the fourth year. One other patient was admitted to hospital with cerebrovascular accident six months after his operation.

The assessment of the clinical status of the patients with respect to NYHA classification in the third month postoperatively is seen in Fig 1.

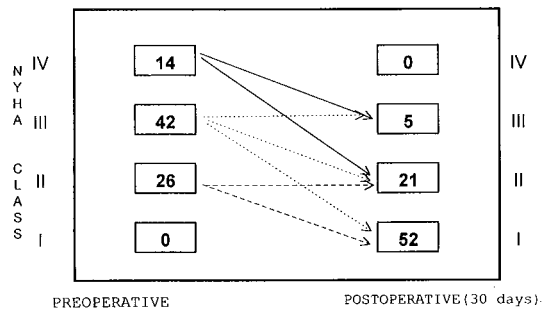


Fig - 1 : Functional capacity of the patients.

DISCUSSION

Because of the numerous valve-related complications after valve replacement procedures, most of the surgeons have been preferring reconstructive methods, recently. Even in the cases that mitral valve repair resulted in mild stenosis or regurgitation, the operative outcome is reported to be better than replacement procedures (1, 6). The results of the studies of Carpentier et al. have encouraged many surgeons to perform valve plasty with various techniques (3, 7).

In our clinic, the patients who underwent mitral valve surgery usually had advanced form of the disease that affected valve morphology and destructed subvalvular apparatus. As a result, the number of prosthetic valve replacement is more than the reconstructive procedures. Considering the low mortality rate (4.87 ± 0.7 %) and the very low incidence of the postoperative morbidity similar to overall standards (8, 9), we prefer to perform reconstructi-

ve techniques as much as possible.

It is advisable also to perform reconstructive valvular surgery as much as possible especially in the developing countries who suffer from the lack of the financial resources and postoperative follow-up. We believe that, reconstructive valve surgery-when feasible-may be the best and the most appropriate operative choice.

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