

(closed-heart in 121, open-heart in 30, and PMC in 12). Mean age was 48 ± 14 years. Valve calcification was present in 62 pts (38%). The mechanism of restenosis was bilateral commissural fusion.

Results: After PMC, valve area increased from 1.1 ± 0.2 to 1.8 ± 0.3 cm². Severe mitral regurgitation occurred in 9 pts (5.5%). Good immediate results (IR) (valve area ≥ 1.5 cm² with MR $\leq 2/4$) were obtained in 135 pts (83%).

The 18-year rate of good functional results (survival without reintervention on the mitral valve and in NYHA class I or II) was $19 \pm 4\%$. After good IR, the rate of good functional results was $58 \pm 4\%$ at 10 years and $23 \pm 5\%$ at 18 years. Multivariate predictive factors of poor late functional results were higher initial NYHA class ($p=0.02$), initial atrial fibrillation ($p<0.001$), and higher mean mitral gradient after PMC ($p=0.004$).

Conclusion: 1) In selected pts with restenosis after previous mitral commissurotomy, PMC provides good IR in the majority of them 2) After good IR, sustained functional improvement is present in almost one out of 4 pts after 18 years, enabling reoperation to be deferred in more than half of pts after 10 years. 3) Predictive factors of late results provide relevant information for patient selection.

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Prevalence and characteristics of paradoxical low flow, low gradient severe aortic stenosis: results from a cardiac catheterization study

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Background: About 15 to 25% of patients with severe aortic stenosis (AS) (aortic valve area, AVA ≤ 1 cm²) have a low transvalvular flow and a low mean gradient (< 40 mmHg) despite preserved left ventricular ejection fraction (LVEF). This entity, named paradoxical low flow, low gradient (PLFLG) AS, was initially described using Doppler-echocardiography. However, some concerns were raised about potential overestimation of the prevalence of this entity by echo. This study aimed to describe the prevalence and clinical characteristics of patients with PLFLG AS using cardiac catheterization data.

Methods and Results: Between 1994 and 2010, 2005 patients underwent cardiac catheterization for evaluation of AS severity and identification of coronary artery disease prior to aortic valve replacement (AVR). Of these patients, we excluded patients with other valvular heart disease or with a LVEF $< 50\%$. Of the remaining 1296, 58% of patients had an AVA ≤ 1 cm² and a mean gradient > 40 mm Hg (classical severe AS), whereas 23% had an AVA ≤ 1 cm² but a mean gradient < 40 mm Hg (PLFLG AS); the remaining 16% were considered not having severe AS and 2% had an AVA > 1 cm² and a mean gradient > 40 mmHg. In comparison to the patients with Classical severe AS, those with PLFLG AS were significantly older, more often female, had lower cardiac output, higher systolic blood pressure, and pulmonary vascular resistance (all $p<0.05$). The percentage of patients who finally underwent AVR was significantly lower (85 vs. 95%) and that of patients who had concomitant CABG was higher (38 vs. 31%) in patients with PLFLG AS.

Conclusion: This large cardiac catheterization dataset shows that PLFLG severe AS is a frequent entity that afflicts up to 23% of the patients with severe AS referred to AVR. These patients had more frequent co-morbidities. These findings further underline the importance to correctly identify this entity so we do not deny surgery to patients with a small AVA and a low gradient despite preserved LVEF.

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Prospective study of quality of life after surgical treatment of rheumatic valve disease in the young

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The surgical management of valvular heart disease is usually assessed in terms of mortality, morbidity, operative and post operative that are often inad-

equate. Few studies have investigated the impact of this heavy surgery on patients quality of life, the aim of our study is to examine the real benefit of surgical treatment of rheumatic valvular heart disease by assessing the quality of life before and 3 months after surgery. This is a prospective study performed on Cardiology and Cardiovascular Surgery departments of University Hospital Mohamed VI in Marrakech, over a period of five months (May-October 2010) The study is still continued.

Patients and methods: We included all patients aged under 40 candidates for valve replacement surgery for rheumatic valvulopathy. Quality of life was assessed by validated Arabic version of the SF 36 score.

Results: 52 patients, mean age 33 years (30 women/22 hommes), symptomatic NYHA IV of 75%, atrial fibrillation in 71%. The period of operability after surgical indication ranged from 6 months to 3 years. It was a mitral disease in 38%, 36% mitral stenosis and aortic disease in 11% of cases. Analysis of SF-36 score before surgery is on average 40 on a scale (0-100), spent on average to 66.4 after surgery and ranged from 45 to 80. Improving quality of life was concerned mainly moderate activities (items 4-5-7-8). The factors identified as influencing the quality of life after replacement: the nature of the valvular disease, its severity, it is an isolated or associated, the dimensions and left ventricular systolic function preoperatively.

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The impact of the percutaneous mitral commissurotomy on the longitudinal left ventricular function

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We suggest that longitudinal left ventricular function assessed by mitral annular velocities and apical mitral annulus motion would improve after relief of mitral stenosis and that serial assessment could be used as an index for quantifying functional changes after percutaneous mitral commissurotomy (PMC).

Methods: Longitudinal left ventricular annular velocities were quantified by spectral pulsed wave Doppler tissue velocity imaging in 62 patients (48 women; mean age 45 ± 10 years who had isolated mitral stenosis and were in sinus rhythm. Echocardiography was performed 1 to 24 hours before PMC and 24 hours, 1 and 3 months after.

We recorded changes in velocities from the lateral and septal corners of the mitral annulus in early diastole, late diastole, volume and systolic function of the left and right ventricular, the maximal and minimal volume and the ejection fraction (EF) of the left atrium by the Simpson method.

Results: After PMC we relieved a decrease in the left atria volume and an improvement of the left ventricular EF ($28.8 \pm 12\%$ a 39.20% , $p=0.003$), an increase of the left ventricular systolic volume (31.11 vs 52 ± 35 ml, $p=0.003$)

The peak annular velocity of systolic excursion in ejection and the mitral annulus motion showed a significant improvement they were respectively at 6.5 ± 1.1 vs 7.9 ± 1.0 , $p=0.001$ and 9.5 ± 1.4 vs 12.6 ± 2 , $p=0.02$). The change in peak annular velocity in the lateral wall correlated well with improvement in the mitral valve orifice area by planimetry ($r=0.953$, $p=0.04$), and inversely correlated with the thickness of the mitral leaflet ($r=-0.953$, $p=0.04$).

Conclusion: Serial evaluation of changes in mitral annular velocities and annulus motion by Doppler tissue imaging aids clinical assessment of immediate improvement in left ventricular function after PMC. These changes are correlated to the anatomy valve and to the improvement of the left ventricular load.

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Gender differences in clinical presentation and outcome of transcatheter Aortic valve implantation for severe aortic stenosis

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Objectives: To clarify the impact of gender difference in transcatheter aortic valve implantation (TAVI) for high-risk patients with severe aortic stenosis.