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Particularities of rheumatic valvular diseases: an experience of Moroccan Hospital

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Introduction Rheumatic valvular disease still common in our country. The aim of our study is to describe characteristics of rheumatic valvular diseases through the experience of Moroccan hospital.

Materials and methods It’s a retrospective study from January 2011 to December 2014, including 571 patients admitted for severe valvular proposed for surgical or interventional treatment, divided in 2 groups: group1 rheumatic valvular diseases (n=238) and group 2 not rheumatic valvular diseases (n=238) and group 2 not rheumatic valvular diseases (n=133). A comparative study between 2 groups is carried out according echocardiographic and therapeutic clinical data.

Results The mean age of Group 1 is 47.4±9.2 years vs 57.8±15.5 years (p<0.0001). In group 2, a male predominance 70.6% vs 47.7% in group 1 (p<0.005). In group 1, the frequency of atrial fibrillation is higher: 42.5% versus 19.5% (p<0.02) with more embolic accident: 13.8% versus 2% (p<0.02). Achieving polyvalvular is more common in group 1: 41.7% versus 24.5% (p<0.04). In the rheumatic group, mitral stenosis is predominant involvement: 35.4% versus 1.9% (p<0.0001). In non-rheumatic group, followed by aortic stenosis, mitral regurgitation are the most frequent respectively: 37.7% versus 12.5% (p<0.0001) and 24.5% vs 1% (p<0.0001). Tricuspid regurgitation is associated in 2 groups: 59.1% versus 30% (p<0.04). For surgery, double mitral and aortic valve replacement is more common in rheumatic group: 28% versus 13.5% (p<0.04). Mitral valve repair could be performed in no patient in group 1 versus 7.7% in group 2 (p<0.01). Tricuspid plasty is performed in 35.3% in group 1 versus 19.2% (p<0.04).

Conclusion Rheumatic disease is primary etiology of valve disease in our country. It is more often polyvalvular. Atrial fibrillation and embolic complications are more frequent. Mitral stenosis is predominant. Tricuspid regurgitation is more common. Treatment usually consists of a double mitral and aortic replacement.

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Assessment of aortic regurgitation: a CMR and TTE comparison study

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Background Assessment of chronic aortic regurgitation (AR) severity remains challenging. While transthoracic echocardiography (TTE) is the most widely used method, velocity-encoded phase-contrast magnetic resonance (PCMR) imaging in the ascending aorta for flow quantification is considered the gold standard method to calculate the regurgitant volume (Reg Vol). The aim of our study was to compare the AR severity by TTE and PCMR in a large series of consecutive patients with aortic valvular heart disease (VHD).

Methods and results Between 2007 and 2014, 283 patients underwent clinically indicated TTE and PCMR (Philips ACHIEVA 1.5 Tesla) within 30 days. Multiparametric approach was used by TTE (vena contracta, pisa method and semi-quantitative method) to grade AR severity. Mean age was 81±9 years, 53% were male. LVEF was not significantly different between TTE and CMR (55±13% and 53±15%); mean trans aortic gradient was >40 mmHg in 53% patients. AR was respectively graded 0, 1, 2, 3 and 4 in 51%, 19%, 13%; 8% and 8% by TTE which corresponded to a Reg Vol of 5.3±3.9ml, 16±3, 26±4, 37±5, and 57±9ml respectively as obtained by PCMR. There was no significant overlap between different Reg vol by PCMR and the 5 grade obtained by TTE; The relation between AR- Reg vol and grade by TTE was not significantly affected by the mean trans-aortic gradient (i.e. c >or< 40 mmHg).

Conclusion TTE as used in routine practice, allows a good discrimination and quantification of chronic AR when compared to that performed by CMR. However, PCMR can be an excellent alternative to TTE in patients who undergo TAVR in whom AR assessment by TTE is often challenging.