

## JOINT EVENT

3<sup>rd</sup> International Conference on Cardiovascular Medicine and Cardiac Surgery  
&  
26<sup>th</sup> Annual Conference on Clinical & Medical Case Reports in Cardiology  
July 05-06, 2018 | Berlin, Germany**Evaluation of dyspnea due to pulmonary hypertension, HFpEF and mitral stenosis****E Flores, M Patel, R Saggar and D Verma**  
University of Arizona, USA

**Background:** Accurate evaluation of mitral valve disease with regards to quantification of regurgitation and stenosis is increasingly important as mitral valve procedures are becoming more prevalent.

**Case:** A 76 year-old man was presented for further evaluation of progressive exertional dyspnea. His past medical history included, HFpEF, sick sinus syndrome s/p permanent pacemaker, bioprosthetic aortic valve replacement (AVR) with mitral valve (MV) annuloplasty and tricuspid valve (TV) repair. He was referred for further evaluation of pulmonary hypertension and possible mitral valve repair due an outside hospital echocardiogram showing severe pulmonary hypertension (RVSP 90mmHg) and moderate mitral stenosis. Initial RHC measurements with exercise were: PA 72/25/46; PCWP 24mmHg; RA 10/12/10; RV 75/2/11. A repeat transthoracic echocardiogram (TTE) with exercise showed left ventricular ejection fraction (LVEF) 55–60%; resting Doppler measurements: mean gradient of 11 mmHg and Vmax 2.2m/s and exercise Doppler measurements: mean gradient of 14mmHg and Vmax 2.6m/s. The 2D evaluation suggested a normal functioning valve (planimetry MVA 2.7 cm<sup>2</sup>). The patient was diuresed and underwent a subsequent RHC (PA 44/18/29, PCWP 15mmHg; RA 9/10/7; RV 46/3/7) and mitral valve study (Figures B-D) due to the discrepancy between the Doppler and 2D/3D echo findings. The patient's final diagnosis was HFpEF, mild pulmonary hypertension and normal MV function.

**Decision-Making:** The initial echocardiographic measurements by TTE showed mitral stenosis with exercise by Doppler but normal valve area by planimetry. The need for patients to undergo cardiac catheterization with hemodynamic assessment when there is a discrepancy between the non-invasive findings is a Class I recommendation. This is especially important if the patient is being considered for valve surgery due to considerable error that can be introduced when PCWP is substituted for LAP. Thus a transseptal approach should be utilized in patients' evaluation.

**Conclusion and Significance:** This case highlights the challenge in the evaluation of mitral valve disease and the need for an accurate and standardized approach to the evaluation process through an invasive hemodynamic approach.