

## Mitral Effective Regurgitant Orifice Area and elevated Pulmonary Artery Pressure Level in Patients with Aortic Valve Stenosis in Morocco

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### Abstract

**INTRODUCTION:** Pulmonary hypertension and mitral regurgitation are frequently associated in the context of patients with aortic stenosis, but there are no specific quantitative studies about how much mitral regurgitation is related to pulmonary hypertension. The purpose of the study was to investigate whether the quantification of Mitral Régurgitation reveals a link to Pulmonary hypertension H in patients with aortic stenosis.

**METHODS:** This is a retrospective study from February 2018 to October 2019 including all patients with Aortic stenosis admitted to the day hospital of the cardiology department. Effective regurgitant orifice area (ERO) was obtained using the proximal isovelocity surface area method. Systolic pulmonary artery pressure was calculated by adding right atrial pressure to the tricuspid regurgitation pressure gradient.

**RESULTS:** The mean age, was  $60 \pm 14$  years; mean ejection fraction :  $56 \pm 9\%$ ; mean aortic valve area :  $1.04 \pm 0.45$  cm<sup>2</sup>; Mitral régurgitation was present in 67,4%. the ERO was  $< 0.20$  cm<sup>2</sup> in 75%, between 0,20 and 0,30 cm<sup>2</sup> in 13,3% and over 0,3cm<sup>2</sup> in 11,7%. Associations between ERO and systolic pulmonary artery pressure was statistically significant ( $P < .0001$ ). This relationship persisted after multivariate adjustment and in the subgroups of patients with severe aortic stenosis or reduced ejection fraction ( $P < .0001$ ) For each 0.10-cm<sup>2</sup> increase, the odds ratio for hypertension pulmonary were 1,43 (95% CI, 0,4-5) ; 2,05(95% CI,1,18-3,5) ; and 3.08 (95% CI, 2.19-6,09) respectively .

**CONCLUSIONS:** In this study we conclude to a relationship between Mitral Regurgitation severity and pulmonary hypertension in patients with aortic stenosis, the presence of MR and its quantitative assessment could become a prognostic marker of a high-risk for patients with aortic stenosis.



### Biography:

Sara Abouradi has completed her medical studies at the age of 24 years from CASABLANCA University School of Medicine. Now, She is working as an intern in cardiology unit at university hospital center ibn rochd of casablanca, She is a member in several voluntary medical associations.

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