

Recommendation of Early Surgery in Primary Mitral Regurgitation: Pros and Cons

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To the Editor,

I have read the article entitled "Recommendation of Early Surgery in Primary Mitral Regurgitation: Pros and Cons" by Rosa et al.¹ with great interest, recently published in *Arquivos Brasileiros de Cardiologia* 2016; 107: 173-5. The investigators reported that currently, the recommendation of mitral surgery for asymptomatic patients is very controversial, since the indication of valvular intervention for symptoms, left ventricular dysfunction and dilatation, recent onset atrial fibrillation or pulmonary arterial hypertension is well consolidated in literature.¹

Quantifying the mitral regurgitation (MR) in echocardiographic quantification is used primarily to aid grading as mild, moderate, and severe regurgitation. Cardiovascular magnetic resonance (CMR) is able to quantify MR with high accuracy and reproducibility using a

combination of left ventricle (LV) volumetric measurements and aortic flow quantification. Myerson et al.² reported that quantifying MR with CMR showed a strong association with the future need for surgery over the subsequent 5 years, demonstrating the potential value of this approach. Previous studies also suggest only moderate agreement between CMR and echocardiography^{3,4} and limited reproducibility for quantitative echocardiographic grading.⁵ Evaluation of MR with CMR showed a significant relation with the future need for mitral valve surgery and was superior to CMR-derived LV volume and echocardiographic grading of regurgitation. These CMR parameters might prove useful for identifying suitable patients for early mitral valve repair/replacement.²

In the light of these knowledge, CMR parameters might be beneficial to determine suitable patients for early mitral valve repair/replacement.

Keywords

Mitral Valve Insufficiency / surgery; Magnetic Resonance Imaging / methods; Echocardiography.

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References

1. Rosa VE, Fernandes JR, Lopes AS, Accorsi TA, Tarasoutchi F. Recommendation of early surgery in primary mitral regurgitation: pros and cons. *Arq Bras Cardiol*. 2016;107(2):173-5.
2. Myerson SG, d'Arcy J, Christiansen JP, Dobson LE, Mohiaddin R, Francis JM, et al. Determination of clinical outcome in mitral regurgitation with cardiovascular magnetic resonance quantification. *Circulation*. 2016;133(23):2287-96.
3. Brugger N, Wustmann K, Hürzeler M, Wahl A, de Marchi SF, Steck H, et al. Comparison of three-dimensional proximal isovelocity surface area to cardiac magnetic resonance imaging for quantifying mitral regurgitation. *Am J Cardiol*. 2015;115(8):1130-6.
4. Uretsky S, Gillam L, Lang R, Chaudhry FA, Argulian E, Supariwala A, et al. Discordance between echocardiography and MRI in the assessment of mitral regurgitation severity: a prospective multicenter trial. *J Am Coll Cardiol*. 2015;65(11):1078-88.
5. Biner S, Rafique A, Rafii F, Tolstrup K, Noorani O, Shiota T, et al. Reproducibility of proximal isovelocity surface area, vena contracta, and regurgitant jet area for assessment of mitral regurgitation severity. *JACC Cardiovasc Imaging*. 2010;3(3):235-43.

Reply

To the Editor,

Thank you so much for your interest in our Article “Indicação Cirúrgica Precoce na Insuficiência Mitral Primária: Prós e Contras”, published in *Arquivos Brasileiros de Cardiologia*.

Cardiovascular magnetic resonance (CMR) is a method of great value, primarily regarding the anatomical diagnosis of valvular diseases. Its main application, to the present day, occurs in patients in which a clinical and echocardiographic dissociation, namely cases in which pro-paedeutics indicates an important valvular disease and the echocardiogram describes such injury as moderate, or vice-versa. In these cases, CMR is a better choice instead of cardiac catheterization together with ventriculography, as it seems less invasive and able to quantify more precisely the cardiac chambers volumes and functions.¹

Myerson et al.² and Enriquez-Sarano et al.³ articles show how extremely important is to demonstrate the existence of patient subgroups which could have benefited from an early mitral valvular surgery. Nevertheless, the parameters evaluated in this article need validation in future studies due to the work's pattern under discussion (observational study, non-blinded, surgical recommendation based on the patient's doctor opinion).

Thus, our opinion is that one must pay attention when recommending intervention based solely on the CMR parameters. However, we are in agreement as to such data is able to, in connection with other risk markers (BPF, effective regurgitant orifice, among others), add information for the *Heart Team* clinical decision.

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References

1. Tarasoutchi F, Montera MW, Grinberg M, Barbosa MR, Piñeiro DJ, Sánchez CR, et al. [Brazilian Guidelines for Valve Disease - SBC 2011 / I Guideline Inter-American Valve Disease - 2011 SIAC]. *Arq Bras Cardiol*. 2011;97(5 supl. 3):1-67.
2. Myerson SC, d'Arcy J, Christiansen JP, Dobson LE, Mohiaddin R, Francis JM, et al. Determination of clinical outcome in mitral regurgitation with cardiovascular magnetic resonance quantification. *Circulation*. 2016;133(23):2287-96.
3. Enriquez-Sarano M, Avierinos JF, Messika-Zeitoun D, Detaint D, Capps M, Nkomo V, et al. Quantitative determinants of the outcome of asymptomatic mitral regurgitation. *N Engl J Med*. 2005;352(9):875-83.