

Letter - Basic and Applied Anatomy

Timing of surgery in Barlow disease

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Dear Sir,

Timing of surgery in chronic mitral valve regurgitation has been a long term matter of debate. Data from European Society of Cardiology suggest that a number close to 36 % of surgical treatment in mitral valve regurgitation is performed too early or too late according to guidelines suggestions (Lung et al., 2003). Bileaflet mitral valve prolapse (Barlow's disease) as correctly reported in the letter by Yiginer et al (Tiginer et al., 2015) may be part of a more complex disease which involves not only mitral leaflets but also fibrous skeleton of the heart leading to a disproportionate increase of left ventricular volumes in absence of severe mitral regurgitation. Thus end systolic volume may be a misleading factor to indicate surgery in this setting of patients . However in patients included in our study mitral valve regurgitation was severe in all patients, average EROA (cm²) was 0.58±0.26 [range 0.25-1.6], 27 patient had persistent or previous episodes of atrial fibrillatio , flail of one of the two leaflets was present in 40 (8 anterior mitral leaflet , 32 posterior mitral leaflet), severe pulmonary hypertension was present in 40%. As suggested by ESC guidelines (Vahanian et al., 2012), in patients at low operative risk, where there is a high likelihood of durable valve repair on the basis of experience of the surgeon, early intervention is justified to halt progression of disease. Atrial fibrillation, pulmonary hypertension and severe anatomic damage (flail) of the leaflets should be considered for surgery despite normal end systolic volume and normal left ventricular ejection fraction. Furthermore successful treatment of AF may obtained with associated radiofrequency ablation (Rostagno et al., 2013).

In conclusion in a high activity volume hospital, mitral valve repair may be performed in patients with Barlow's disease to correct severe anatomic damage of the valve leaflets, to halt progression of hemodynamic changes and to treat or prevent atrial fibrillation before left ventricular dysfunction occur .

References

Lung B., Baron G., Butchart E.G., Delahaye F., Gohlke-Bärwolf C., Levang O.W., Toranos P., Vanoverschelde J.L., Vermeer F., Boersma E., Ravaud P., Vahanian A. (2013)

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- A prospective survey of patients with valvular heart disease in Europe: the Euro Heart Survey on Valvular Heart Disease. *Eur. Heart J.* 24: 1231-1243.
- Yiginer O., Tokatli A., Dogan M., Ozmen N. (2015) Independently from mitral regurgitation Barlow disease may cause left ventricular enlargement and thereby anticipation of surgery. *Ital. J. Anat. Embryol.*, this same issue.
- Vahanian A, Alfieri O, Andreotti F, Antunes MJ, Barón-Esquivias G, Baumgartner H, Borger MA, Carrel TP, De Bonis M, Evangelista A, Falk V, Jung B, Lancellotti P, Pierard L, Price S, Schäfers HJ, Schuler G, Stepinska J, Swedberg K, Takkenberg J, Von Oppell UO, Windecker S, Zamorano JL, Zembala M., Joint Task Force on the Management of Valvular Heart Disease of the European Society of Cardiology (ESC); European Association for Cardio-Thoracic Surgery (EACTS). (2012) Guidelines on the management of valvular heart disease (version 2012). *Eur. Heart J.* 33: 2451-2496.
- Rostagno C., Droandi G., Gelsomino S., Carone E., Gensini G.F., Stefano P.L. (2013) Surgical RF ablation of atrial fibrillation in patients undergoing mitral valve repair for Barlow disease. *Cardiology* 125: 141-145.