

Functional Mitral Regurgitation Repair: Earlier Is Better

To the Editor:

Kamperidis and colleagues [1] are to be commended for outlining the predictive role of early postoperative left ventricular (LV) forward stroke volume on late outcome after functional mitral regurgitation (MR) repair with a restrictive ring. Baseline transaortic flow has been reported to predict late death and recurrent MR after LV restoration and MR correction [2], reflecting the detrimental effects of backward flow and MR in dilated cardiomyopathy [3, 4]. The authors focused on death and a major morbidity-and-mortality composite end point, rather than relapsing MR, and stated that associations of changes in LV hemodynamics with survival has not been investigated.

However, we reported near-identical outcomes after ischemic MR repair, namely, acute LV reverse remodeling, unchanged ejection fraction, and trivial MR [5]. Besides, we also outlined how ejection fraction, LV end-systolic volume index (ESVI) and wall motion at discharge predicted different probabilities of late reverse remodeling, whereas early postoperative wall motion and ESVI anticipated death and heart failure, respectively. In other words, the severity of the underlying cardiomyopathy, not only at baseline but also immediately after repair, affects late outcome, and stroke volume only represents an additional surrogate to depict this.

In analogy to our experience, the authors describe MR repair before extreme LV dilatation (mean end-diastolic volume, 188 mL), whereas cause was nonischemic in 78% of the patients, suggesting that MR can be durably cured with earlier repair, irrespective of concurrent revascularization.

Finally, results refer to complete rings and annular restriction by two sizes, confirming the importance of anteroposterior mitral diameter fixation [5]. Despite some degree of diastolic impairment, the predictability of postoperative LV function is a

pivotal key to optimize late outcome after functional MR repair, justifying aggressive indications.

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References

1. Kamperidis V, van Wijngaarden SE, van Rosendael PJ, et al. Restrictive mitral valve annuloplasty: prognostic implications of left ventricular forward flow. *Ann Thorac Surg* 2017;104:1464–70.
2. Hirota M, Yoshida M, Hoshino J, Kondo T, Isomura T. Pre-operative transaortic forward flow: prediction of surgical outcomes in patients with DCM and mitral regurgitation. *Asian Cardiovasc Thorac Ann* 2015;23:781–6.
3. Pocar M, Di Mauro A, Passolunghi D, et al. Predictors of adverse events after surgical ventricular restoration for advanced ischaemic cardiomyopathy. *Eur J Cardiothorac Surg* 2010;37:1093–100.
4. Rossi A, Dini FL, Faggiano P, et al. Independent prognostic value of functional mitral regurgitation in patients with heart failure. A quantitative analysis of 1256 patients with ischaemic and non-ischaemic dilated cardiomyopathy. *Heart* 2011;97:1675–80.
5. Pocar M, Passolunghi D, Moneta A, et al. Baseline left ventricular function and surgical annular stiffening to predict outcome and reverse left ventricular remodeling after undersized annuloplasty for intermediate-degree ischemic mitral regurgitation. *J Thorac Cardiovasc Surg* 2010;139:1529–38.