Reviewer's report

Title: A new shape for an old function: lasting effect of a physiologic surgical restoration of the left ventricle

Version: 2 Date: 30 October 2006

Reviewer: Giorgio Arpesella

Reviewer's report:

The present study involves 12 patients with ischemic cardiomyopathy, low ejection fraction and wide left ventricular volumes, treated with a modified Left Ventricular restoration by means of an oval patch. Surgical technique is well described. It's of great interest how the patch is trimmed, sized and positioned. Even if the operation is a modification of the Dor’s procedure, the use of a small oval patch, obliquely positioned inside the ventricle, may obtain a more functional and anatomical restoration of the left ventricle. The absence of Fontan purse-string is a crucial point of this surgical technique.

The way which the authors have performed the follow-up and have evaluated eleven geometrical and functional echo parameters makes this study very complete and thoughtful.

The results are promising in terms of improvement of functional status and most of the echo parameters evaluated at the 3 follow-up time remained the same during time.

This paper presents a well described method with sufficient details; the discussion and the conclusions are well balanced.

Even if the group is quite homogeneous, it remains unclear how the LV remodelling influences the Mitral Valve function, since the Authors showed new onset of mitral regurgitation (grade 1 and 2) in those patients without MR preoperatively (2/5), complete resolution of MR grade 1 and partial resolution of MR 2, with late recurrence in one patients at the FU 3. How the authors may explain that heterogeneous course of the mitral valve function? Does left ventricular restoration influences mitral valve function? As the Authors concluded in the paper, a wider indication to repair mitral regurgitation may be required.

The article is worthy to be accepted for publication with discretionary revisions.

What next?: Accept after discretionary revisions

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.