

acceptable currently. It is suggested that radiation safety training to be offered at the beginning of residency/fellowship for residents/fellows in a comprehensive and uniform way throughout medical universities.

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Monocuspidalisation of the mitral valve can be a solution for ischemic mitral regurgitation

To the Editor,

Mitral valve repair is the preferred treatment for patients with mitral valve regurgitation (MR); however almost one third of all diseased mitral valves cannot be repaired (1). This ratio is even worse in patients with ischemic MR (2). Ischemia and resultant segmental or global left ventricle dilatation results in restriction of posterior leaflet motion. Tethering of the posterior leaflet (Type IIIb MR) makes it unavailable for coaptation with the anterior leaflet in the absence of structural damage to the valve (3). The standard surgical approach to attain competence is revascularization and remodeling of the mitral valve annulus with a restrictive annuloplasty. Downsizing 1 or 2 sizes does not relieve tethering but shifts the posterior annulus anterior to achieve coaptation (2, 3). Early results are generally satisfactory but unfortunately further remodeling of the left ventricle cause a deterioration of the regurgitation during the first six months following the procedure. Restrictive annuloplasty is also accompanied by the risk of functional MV stenosis (4). As the conventional repair of ischemic MR can be suboptimal with high recurrence rates, many surgeons prefer mitral valve replacement (MVR) which means "Replacing a disease with another!"

A new device called Mitrofix™ can be an option to restore mitral valve functions where the posterior leaflet is partially or completely

dysfunctional as in ischemic MR. It is a bio-posterior leaflet that imitates a closed posterior mitral valve. Using the device results in monocuspidalisation of the mitral valve by preserving the anterior leaflet and the subvalvular apparatus. As the anterior leaflet contributes 70% of the mitral valve effective orifice area (EOA), the resultant EOA is much more than what we expect for restrictive annuloplasty or MVR (5).

We have been using this device in ischemic MR since July 2013 and our initial experience is much more than satisfactory. The device was successfully implanted in 6 patients and the early intraoperative and postoperative echocardiography demonstrated none or trivial residual MR in 5 of them and 1-2+ in one. Importantly, the mean EOA measured was 2.26 cm², with a mean gradient of 4.5 mmHg during the first postoperative control before discharge. Our results are comparable with the results of Oertel et al. (5), who published first multicenter study using this device in 2012.

We still don't know the long term follow up but Mitrofix™ has some theoretical advantages in the long term. Such advantages include avoidance of anticoagulation and fewer recurrence of MR since further remodeling of left ventricle (LV) will not affect the bio-posterior leaflet and the valve will become competent unless anterior leaflet functions improperly. We are thus coming to a conclusion that total monocuspidalisation of the mitral valve (Restore rather than repair) can be a solution for ischemic MR in near the future; we believe awareness of this treatment option should increase among cardiac surgeons and cardiologists.

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