SAFETY AND FEASIBILITY OF A NEW ADJUSTABLE MITRAL ANNULOPLASTY RING: A MULTICENTRE EUROPEAN EXPERIENCE

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Objectives: Recurrence of mitral regurgitation (MR) after mitral valve repair is not infrequent. We report the safety and feasibility of a novel adjustable annuloplasty device that permits downsizing the ring late after the initial surgery through a minimally invasive procedure under beating-heart conditions.

Methods: In this multicentre, non-randomised, observational registry, 82 patients with moderate or severe MR (mean age 69 ± 10 years, mean EuroSCORE II 6.85 ± 6.35, 70% male, 51% ischaemic MR and 33% dilative cardiomyopathy) undergoing surgical mitral valve repair with this device were evaluated. Endpoints included in-hospital mortality, MR reduction and ring adjustment at follow-up.

Results: In all patients, a significant reduction in MR was accomplished in the initial surgical procedure (99% of the patients with none or mild MR). In-hospital mortality was observed in 4 patients, 2 cardiac not device-related, and 2 non-cardiac deaths. Ring dehiscence occurred in 1 patient, stroke in 2 patients. In 12 patients (15%), an attempt to adjust the ring was performed due to recurrent MR (mean 9.5 months after surgery; 1 week to 19 months). In 3 of these attempts a technical failure occurred, in 1 patient, MR was reduced 2 levels, in 2 patients MR was reduced 1 level, and in 6 patients, MR did not change significantly.

Conclusion: We conclude that implantation of this new adjustable annuloplasty ring is safe and effective. Late adjustment of this ring is feasible and may allow addressing recurrent MR. Additional experience and long-term follow-up are required to establish the clinical value of this technology.