Letters to the Editor

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Systolic anterior motion of the mitral valve

To the Editor:

We read with interest the article from Brown and colleagues¹ questioning the optimal management of systolic anterior motion (SAM) after mitral valve reconstructive surgery. In their series, SAM occurred in 11% of patients with degenerative valve disease who underwent mitral valve repair. However, they also showed that, in the majority of cases, this complication could be treated conservatively and did not require a reoperation provided that beta blockers were given over a certain period of time. If we agree with them that a surgical intervention is not always necessary, we think that this article raises another important question: would it not have been better to try to avoid SAM in these patients and therefore avoid postoperative beta blockers, certainly useful in this setting but not without side effects?

The mechanism of SAM, the risk factors involved, and the technical means to prevent it are now widely established.^{2,3} SAM occurs when there is a discrepancy between the amount of valvular tissue and the mitral valve orifice area. After valvular reconstruction, the two major risk factors predisposing to SAM are (1) excess leaflet tissue (Barlow disease) and (2) implantation of a too small prosthetic ring or band. Postoperative SAM can be prevented provided that the principal rules of reconstructive surgery are applied systematically and include (1) reduction of the height of the posterior leaflet to less than 15 mm whenever excess tissue is present, (2) proper sizing of the anterior leaflet, and (3) insertion of a large prosthetic ring.³

In Barlow disease, the insertion of rings equal to or greater than 36 mm is usually necessary.⁴ In this study, the authors found no correlation between the size of the ring and the occurrence of SAM; however, they did not mention the different sizes of implanted rings. Four of the 7 patients who underwent reoperation had a size 30- to 34-mm partial flexible band, which is con-

sidered very small in patients "at risk of SAM."¹ In addition, among these 7 patients, the resolution of SAM required the removal of the ring in 3 patients, demonstrating the role played by the implantation of a ring of inadequate size.

The authors did not provide information on the different types of degenerative valvular diseases in their series, in particular the respective number with Barlow diseases and fibroelastic deficiency, a distinction made possible in most instances by clinical and morphologic criteria.⁵ This would have been important information inasmuch as a partial triangular resection of the posterior leaflet is usually sufficient for preventing SAM in fibroelastic deficiency whereas a sliding leaflet technique reducing the height of the posterior leaflet is necessary in Barlow. Because the latter technique was used in only 1 case in the authors' series, one may postulate that the 11% incidence of SAM that they observed involved Barlow valves and could have been prevented by a sliding leaflet technique. We are aware that some surgeons are reluctant to use this technique, arguing that it is difficult and that the leaflet tissue should be respected rather than resected. However, resecting pathologic tissue is current practice in surgery whenever it creates deleterious effects. In addition, the sliding leaflet technique is actually not difficult³ and certainly is preferable to beta blockers. After careful application of the basic rules underlined above, SAM has been practically eliminated in our experience.^{3,4}

One of the most remarkable values of reconstructive valve surgery is to allow the patient to enjoy a normal life without medication and, in many instances, "to be cured for the rest of his life."⁵ We would like to congratulate the authors for their seminal contributions in this field and their excellent results.

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Reply to the Editor:

We are pleased that Drs Filsoufi and Carpentier enjoyed our article, but they may have misinterpreted our results. We are not aware of other studies of systolic anterior motion (SAM) that include early and late intraoperative echocardiography. Our study also differs from others in that we have included only patients with mitral valve pathologies at risk of SAM development. Some authors do not make this distinction and report an artificially low incidence.¹ The 11% incidence of SAM, which Drs Filsoufi and Carpentier mention, includes all patients with SAM on early intraoperative transesophageal echocardiography. After medical management, the incidence of SAM intraoperatively decreases to 6% and then to 4% by hospital dismissal. Previous investigations that estimate the risk of SAM have reported echocardiographic findings at varying times, and therefore comparisons are difficult.¹⁻³ But the important point is that the risk of SAM appears low and diminishes with time and ventricular remodeling.

Therefore the question of whether prophylactic measures should be used to "prevent SAM" is a bit more complicated than

the correspondents might be thinking. As noted in the article, the risk of development of symptoms related to late SAM using the techniques we describe is extremely low (16/17 patients in New York Heart Association class I, 1 patient lost to follow-up). Also, SAM has been described with all methods of valve repair, including quadrangular resection with a sliding leaflet technique.⁴⁻⁷

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Tricuspid valve repair: Indication and type of repair

To the Editor:

We read with great interest the article by Ghanta and colleagues¹ concerning their results with repair of functional tricuspid regur-

gitation. After the comparison between Kay's annuloplasty versus ring annuloplasty on the tricuspid valve, they concluded that there is not a significant difference in the midterm results. Ghanta and colleagues recommend bicuspidization annuloplasty as an option to ring annuloplasty because it is inexpensive, simple, and reliable.

We do agree with the authors that moderate-to-severe tricuspid regurgitation should be repaired when a concomitant cardiac procedure is performed. At our institution, we are rather liberal in the indication for tricuspid repair. We perform about 50 cases of repair yearly on the tricuspid valve (46–61 per year in the last 3 years) of approximately 1200 total cardiac procedures. Our experiences show that repair of tricuspid regurgitation improves early postoperative outcome and long-term quality of life. Long-term survival after cardiac surgery depends mainly on the postoperative left ventricular performance. Indications for tricuspid valve repair should be decided preoperatively, according to the results of echocardiography. Intraoperative evaluation of tricuspid regurgitation is not reliable enough.

The method of repair on the tricuspid valve is another question. Cohn² recommends use of a ring if the tricuspid regurgitation is severe and suture annuloplasty if it is moderate. We have had good experiences with both de Vega annuloplasty and Kay's suture bicuspidization. In our experience (published in 1980), we found that, in about 70% of the cases, tricuspid repair (de Vega or Kay's) provided good results at a mean follow-up of 4 years.³ Since then, we used mostly de Vega repair with multifilament suture material, and we have had good experiences in several hundred cases. We even used an adjustable half-moon ring for tricuspid annuloplasty in a group of patients with good results.⁴ The ring annuloplasty had no better results compared with those of the suture annuloplasty, it is more expensive, and it takes more time and can reduce annular flexibility. That is why we do not use it routinely.

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