

References

1. Vagefi PA, Bates NR, Ptaszek LM, Adams MS, Walker JD. Valve-sparing excision of aortic valve papillary fibroelastoma. *J Thorac Cardiovasc Surg.* 2006;131:1177-8.
2. Saxena P, Lee A, Konstantinov IE, Newman MAJ. Papillary fibroelastoma of aortic valve: diagnosis and surgical management. *Heart Lung Circ.* In press.
3. Bossert T, Gummert JF, Mohr F. Papillary fibroelastomas and other cardiac tumors should be resected on an urgent basis. *Ann Thorac Surg.* 2005;79:756.
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Suture annuloplasty for mitral valve repair

To the Editor:

We read with great interest your article published in the January issue of the *Journal of Thoracic Cardiovascular Surgery*.¹ At our department the modified Paneth annuloplasty suture was introduced in 1992 and has been used in 866 cases until the end of 2005.

The cause of the mitral incompetence, the early mortality, and the reoperation rate in the different groups are summarized in Table 1. Approximately half of the annuloplasties were performed to correct annular dilatation secondary to severe aortic valve disease or ischemic heart disease. Our policy for secondary annular dilatation is that if the mitral regurgitation is grade 2 or more on admission, a suture annuloplasty is performed, even if the valve is structurally normal. In patients in whom the mitral valve was structurally abnormal (primary mitral valve disease), a wide range of procedures were performed, including valvotomy, quadrangular resection, sliding leaflet plasty, patch repair of the anterior leaflet, annular decalcification, and repair of the anterior leaflet. The suture

annuloplasty was also used in a few cases of dilated cardiomyopathy to restore the mitral valve competence.

Since 2002, 56 patients have required reoperation for severe recurrent mitral regurgitation. After complex valve repair there were 37 reoperations (9.2%): 25 in the degenerative group, 12 in the rheumatic group, and none after endocarditis. In the secondary annular dilatation group, 14 patients required valve replacement because of recurrent ischemic mitral incompetence (5.6%). The worst results were obtained in patients with dilated cardiomyopathy.

On the basis of the results of our pioneer series, the suture material was changed from 3-0 Prolene to 3-0 polytetrafluoroethylene (Gore-Tex, WL Gore and Associates, Flagstaff, Ariz).² However, over the years we had 4 cases of early failure (within 1 week after repair) caused by broken polytetrafluoroethylene (Gore-Tex) sutures. In all cases the intraoperative transesophageal echocardiography confirmed good valve competence. At the time of reoperation, the suture was in the annulus but broke just at the knot in all cases. Recently, we also had a case in which the suture cut through the annulus creating a string in the mitral annulus and causing severe hemolysis 5 years after the original operation.

Overall, our long-term results with suture annuloplasty combined with complex mitral valve repair are inferior to the results with ring implantation. However, using the technique for the repair of secondary annular dilatation is safe and gives reproducible long-term results. Moreover, in ischemic mitral regurgitation the annuloplasty suture might help to restore and preserve the normal annular and leaflet dynamic motion.^{3,4}

TABLE 1. Cause of mitral incompetence, mortality, and reoperation rate in patients who underwent suture mitral annuloplasty between 1992 and 2005

	No. of cases	Mortality	Reoperation
Mitral valvular pathology	403	3 (0.7%)	37 (9.2%)
Degenerative	302	2 (0.7%)	25 (8.3%)
Rheumatic	80	1 (1.2%)	12 (15.2%)
Endocarditis	21	0 (0%)	0 (0%)
Annular dilatation	463	27 (5.8%)	19 (4.4%)
Ischemic	268	18 (6.7%)	14 (5.6%)
Aortic valve disease	160	5 (3.1%)	0 (0%)
Dilated cardiomyopathy	35	4 (11.5%)	5 (16%)

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References

1. Aybek T, Risteski P, Miskovic A, Simon A, Dogan S, Abdel-Rahman U, et al. Seven years' experience with suture annuloplasty for mitral valve repair. *J Thorac Cardiovasc Surg.* 2006;131:99-106
2. Nagy ZL, Bodi A, Vaszily M, Szerafin T, Horvath A, Peterffy A. Five-year experience with a suture annuloplasty for mitral valve repair. *Scand Cardiovasc J.* 2000;34:528-32.
3. Tibayan FA, Rodriguez F, Liang D, Daughters GT, Ingels NB Jr, Miller DC. Paneth suture annuloplasty abolishes acute ischemic mitral regurgitation but preserves annular and leaflet dynamics. *Circulation.* 2003;108(Suppl 1):II128-133.
4. Tibayan FA, Rodriguez F, Langer F, Liang D, Daughters GT, Ingels NB, et al. Mitral suture annuloplasty corrects both annular and subvalvular geometry in acute ischemic mitral regurgitation. *J Heart Valve Dis.* 2004;13:414-20.

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Reply to the Editor:

We appreciate the comments by Nagy and Peterffy.¹ Their respectable experience with the modified Paneth annuloplasty suture for mitral valve repair in more than 800 cases extends well over a decade; nevertheless, their results support our conclusion that suture annuloplasty may not be a durable treatment option.²

In their hands, early postoperative results were satisfactory as the repair resulted in competent valve with preserved annular and mural leaflet mobility. Contrary to our experience, they have not seen any intraoperative left circumflex artery injury. Over the years of follow-up, 56 (6.47%) patients returned for reoperation. They report that suture knot insufficiency was the cause of recurrent mitral regurgitation. The majority of reoperated valves, however, were insufficient mainly due to recurrent ring dilatation, with the worst results obtained in the ischemic and dilated cardiomyopathy groups.

Again, the durability of the suture annuloplasty is questioned. Contrarily, the evidence that a prosthetic ring annuloplasty stabilizes the repair in a more durable fashion is accumulating.³ In a well-constructed study, Cohn and coworkers were among