nulus distortion or perioperative morbidity as reported by Dr Aazami.

Although the findings of Lomholt and associates⁶ contradict the statements of Kunzelman and Cochran,⁷ the results of Messas and colleagues⁸ are more consistent with the major role of stress generated by primary chordae in comparison with the secondary ones. In addition, the intact marginal chordae continue to prevent leaflet prolapse or failure and can, theoretically, continue to maintain left ventricular function through chordal continuity as a benefit of valve repair as opposed to replacement.^{9,10} In our experience, the chordal cutting procedure did not impair the midterm (3 years' follow-up) left ventricular function, as shown by the absence of MR at rest and mild MR on exertion (Figure 1, C and D).

Finally, this report has reopened the debate regarding a very difficult question that continually challenges cardiologists and surgeons. Indeed, the optimal surgical treatment of ischemic MR in patients with varying degrees of MR and coronary artery disease is controversial. The complex pathophysiology and heterogeneous clinical presentation of this group of patients could be an explanation for this controversy. The answer could be provided by wide, controlled, randomized studies comparing CABG associated with mitral valve plasty by chordal cutting with or without annuloplasty.

G. Fayad, MD

T. Modine, MD

H. Warembourg, MD

Hôpital Cardiologique
CHRU de Lille, France

References

1. Arcidi MJM, Hebler RF, Craver JM, Jones EL, Hatcher CR, Guyton RA. Treatment of moderate mitral regurgitation and coronary disease by coronary bypass alone. *J Thorac Cardiovasc Surg.* 1988;95:951-9.
2. Aklog L, Filsoufi F, Flores KQ, Chen RH, Cohn LH, Nathan NS, et al. Does coronary artery bypass grafting alone correct moderate ischemic mitral regurgitation? *Circulation.* 2001;104:168-75.
3. Duarte IG, Shen Y, MacDonald MJ, Jones EL, Craver JM, Guyton RA. Treatment of moderate mitral regurgitation and coronary disease by coronary bypass alone. *Ann Thorac Surg.* 1999;68:426-30.
4. Lamas GA, Mitchell GF, Flaker GC, Smith SC Jr, Gersh BJ, Basta L, et al. Clinical significance of mitral regurgitation after acute myocardial infarction: Survival And Ventricular Enlargement Investigators. *Circulation.* 1997;96:827-33.
5. Trichon BH, Glower DD, Shaw LK, Cabell CH, Anstrom KJ, Felker GM, et al. Survival after coronary revascularization, with and without mitral valve surgery, in patients with ischemic mitral regurgitation. *Circulation.* 2003;108 Suppl 1:II103-10.
6. Lomholt M, Nielsen SL, Hansen SB, Andersen NT, Hasenkam JM. Differential tension between secondary and primary mitral chordae in an acute in-vivo porcine model. *J Heart Valve Dis.* 2002;11:337-45.
7. Kunzelman KS, Cochran RP. Mechanical properties of basal and marginal mitral valve chordae tendineae. *ASAIO Trans.* 1990;36:M405-8.
8. Messas E, Pouzet B, Touchot B, Guerrero JL, Vlahakes GJ, Desnos M, et al. Efficacy of chordal cutting to relieve chronic persistent ischemic mitral regurgitation. *Circulation.* 2003;108(Suppl 1)II111-5.
9. Reardon MJ, David TE. Mitral valve replacement with preservation of the subvalvular apparatus. *Curr Opin Cardiol.* 1999;14:104-10.
10. David TE, Burns RJ, Bacchus CM, Druck MN. Mitral valve replacement for mitral regurgitation with and without preservation of chordae tendineae. *J Thorac Cardiovasc Surg.* 1984;88:718-25.

doi:10.1016/j.jtcvs.2005.06.042

Early anticoagulation after aortic valve replacement with bioprostheses: Time to abandon it?

To the Editor:

According to the American College of Cardiology/American Heart Association (ACC/AHA) Guidelines for Valvular Heart Disease,¹ a 3-month-long program of anticoagulation therapy is recommended after valve replacement with tissue valves. On the contrary, a recent study carried out by the Cardiothoracic Surgery Network (CTS-Net) Valve Technology Center, "The Anticoagulation Therapy and Valve Replacement Study,"² has outlined that the practice tends to diverge from the widely established guidelines. In fact, 80% of 726 participating surgeons prefer to adopt antiplatelet therapy in biologic valve recipients who do not have additional risk factors for thromboembolic events.

Sundt and associates³ have demonstrated in 624 patients that anticoagulant therapy after aortic valve replacement (AVR) did not offer advantages in terms of neurologic morbidity compared with 527 patients who did not receive warfarin.

Similarly, at our institution, the policy currently adopted is to administer aspirin despite warfarin during the 3-month time interval necessary for the sewing ring to become completely endothelialized. Anti-

coagulants remain indicated in the presence of comorbidities that leave the patient at risk for thromboembolism, such as chronic atrial fibrillation, atriomegaly, severe impairment of left ventricular function, and ventricular aneurysms.

Nevertheless, we share the concerns raised by the CTSNet. In fact, currently there is no clear evidence that this alternative approach is free from neurologic detrimental effects. We believe that the satisfactory clinical results in terms of cerebrovascular accidents reported by Sundt and coworkers³ cannot exclude the possibility of asymptomatic microembolization and that mere clinical evaluation might be limited.

At our institution, to overcome a potential underestimation related to sheer clinical observations, we decided to evaluate the occurrence of microembolic signals (MES) in patients after heart valve replacement surgery by transcranial Doppler. Our preliminary results in 58 patients (43 men and 15 women, mean age 69.8 years) undergoing tissue valve replacement (23 patients) versus mechanical valve replacement (35 patients) let us draw a correlation between the absence of clinical neurologic impairment (0% of neurologic complications) and the absence of MES in the subcohort of aortic biologic valve patients who received aspirin instead of warfarin in the early postoperative period (0% of MES at transcranial Doppler). On the basis of these preliminary results, we set out on a prospective clinical trial randomizing patients, after AVR, for antiplatelet versus anticoagulant early therapy. The postoperative evaluation pursued in the trial, which is ongoing, is both clinical and instrumental, aiming to detect potential clinically silent microembolization.

We believe that the positive clinical results encountered by Sundt and associates³ and shared also by our experience need instrument-based evidence to represent a firm basis and efficacious stimulus toward reconsideration of guidelines.

Francesca di Marco, MD^a

Giorgio Meneghetti, MD^b

Gino Gerosa, MD^a

Institute of Cardiovascular Surgery^a

Neurology Division^b

Padua University Medical School
Padova, Italy

References

1. Bonow RO, Carabello B, de Leon AC, Edmunds LH Jr, Fedderly BJ, Freed MD, et al. ACC/AHA Guidelines for the Management of Patients With Valvular Heart Disease. Executive Summary. A report of the American Col-

lege of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Management of Patients With Valvular Heart Disease). *Circulation*. 1998;98:1949-84.

2. <http://www.ctsnet.org/file/AnticoagulationSurveyFinalResultsSlidesPDF.pdf>.
3. Sundt TM, Zehr KJ, Dearani A, Daly RC, Mul-lany CJ, McGregor CG, et al. Is early anticoagulation with warfarin necessary after bioprosthetic aortic valve replacement? *J Thorac Cardiovasc Surg*. 2005;129:1024-31.

doi:10.1016/j.jtcvs.2005.07.006

Atrial septal defect in infancy: To close or not to close?

To the Editor:

I read with great interest the article by Lammers and associates¹ advocating that closure of an atrial septal defect (ASD) should not be postponed to a later age if clinical problems that can be attributed at least in part to the ASD are present. However, a closer look at the historical cohort of Lammers and associates reveals that it is composed mainly of premature syndromic infants in whom the major issue is bronchopulmonary dysplasia and pulmonary hypertension rather than left-to-right shunt across the ASD.² Hence the suggestion of the authors, in the opinion of this reader, is controversial.

Although ASD is the second most common congenital heart disease in children,³ there are still few unanswered questions related to the appropriate timing of closure. Because patients with even large ASDs are mostly asymptomatic, closure is recommended around 3 to 5 years of age, before the child goes to school. Postponing surgical intervention to this age also allows for spontaneous closure of the ASD in some children.⁴ In fact, there does not appear to be any significant benefit in ASD closure before 3 to 5 years of age in small- to moderate-sized defects.⁵

In the opinion of this reader, in the present era of better ventilator equipment and styles of ventilator management, along with widespread use of corticosteroids prenatally and surfactant, nitric oxide, and pulmonary vasodilator therapy postnatally, surgical ASD closure can be postponed in patients with compromised lung function unless all available means of improving lung function have been tried. Only when pulmonary compromising factors have been corrected will an attempt at surgical ASD closure in infancy be valid because even though mortality for major operations with cardiopulmonary bypass in infants

with low weight has become low, a definite morbidity still persists.

Shahzad G. Raja, MRCS
Department of Cardiac Surgery
Royal Hospital for Sick Children
Yorkhill NHS Trust
Dalnair St
Glasgow G3 8SJ
United Kingdom

References

1. Lammers A, Hager A, Eicken A, Lange R, Hauser M, Hess J. Need for closure of secundum atrial septal defect in infancy. *J Thorac Cardiovasc Surg*. 2005;129:1353-7.
2. Dammann O, Leviton A, Gappa M, Dammann CE. Lung and brain damage in preterm newborns, and their association with gestational age, prematurity subgroup, infection/inflammation and long term outcome. *BJOG*. 2005;112(suppl 1):4-9.
3. Radzik D, Davignon A, van Doesburg N, Fournier A, Marchand T, Ducharme G. Predictive factors for spontaneous closure of atrial septal defects diagnosed in the first 3 months of life. *J Am Coll Cardiol*. 1993;22:851-3.
4. Saxena A, Divekar A, Soni NR. Natural history of secundum atrial septal defect revisited in the era of transcatheter closure. *Indian Heart J*. 2005;57:35-8.
5. McMahon CJ, Feltes TF, Fraley JK, Bricker JT, Grifka RG, Tortoriello TA, et al. Natural history of growth of secundum atrial septal defects and implications for transcatheter closure. *Heart*. 2002;87:256-9.

doi:10.1016/j.jtcvs.2005.06.039

Reply to the Editor:

We appreciate Dr Raja's interest in our recent study.¹

We agree that in asymptomatic children closure of an isolated secundum-type atrial septal defect (ASD II) should be undertaken after 4 to 5 years of age because this might allow for spontaneous closure and facilitate interventional closure in some patients. However, we describe a specific group of patients in whom symptoms have been at least in part related to the presence of an ASD II. In these patients with compromised lungs and rarefied pulmonary vasculature, even a minor left-to-right shunt is poorly tolerated, and early surgical closure could be beneficial.

Our catheter data showed that the majority of the children had a left-to-right shunt that varied in magnitude, as is demonstrated by the Qp/Qs ratio. The actual effect of the left-to-right shunt on the infant's clinical condition is difficult to as-

sess. However, the ASD is an additional factor compromising the child's situation. One cannot treat lung hypoplasia or severe chronic lung disease, but an ASD is amenable to treatment.

There might be a subgroup of patients in whom closure of an ASD is contraindicated. In the presence of progressive pulmonary vascular disease, the existence of an ASD can improve survival.²

Dr Raja suggests that surgical ASD closure in infancy should only be performed after all other compromising factors are corrected. Yet even in the current era of better ventilator management and use of antenatal corticosteroids, nitric oxide, and surfactant leading to improved survival of infants, correction of the lung-compromising factors is not always possible. Moreover, long-term hospitalization and prolonged ventilation of these children is associated with substantial morbidity, including barotrauma, hospital-acquired infections, and immobilization. Therefore we contend that a subgroup of infants can indeed benefit from early ASD closure. Careful patient selection, however, remains a clinical challenge and requires a multidisciplinary approach involving cardiologists, intensivists, and cardiothoracic surgeons to determine the right timing of ASD closure for each individual child.

Astrid Lammers
John Hess, MD, FESC
Klinik für Kinderkardiologie und angeborene Herzfehler
Deutsches Herzzentrum München
Technische Universität München
Munich, Germany

References

1. Lammers A, Hager A, Eicken A, Lange R, Hauser M, Hess J. Need for closure of secundum atrial septal defect in infancy. *J Thorac Cardiovasc Surg*. 2005;129:1353-7.
2. Rozkovec A, Montanes P, Oakley CM. Factors that influence the outcome of primary pulmonary hypertension. *Br Heart J*. 1986;55:449-58.

doi:10.1016/j.jtcvs.2005.07.020

The evaluation of aortic atherosclerosis and distensibility in aortic valve stenosis—The role of transesophageal echocardiography To the Editor:

We read with great interest and congratulate Weisenberg and associates on their trans-