However, the real question that our specialty needs to address is this: How should cardiac surgery deal with the fact that technology changes rapidly, that the potential therapeutic options for patients increase faster than prospective trials can evaluate them, and that each year patients who undergo cardiac surgery continue to be sicker, older, and at higher risk for complications?

Currently, significant and often unperceived conflicts of interest exist for everyone involved, and it is difficult for the patient to make a well-informed opinion. As patients get sicker and hear about advancing technology, they are more likely to have unrealistic expectations. New technology is often offered to patients more as part of a marketing tool than as a proven therapy. Often, both the surgeon and the cardiologist will be reimbursed from a newer hybrid technique. Conflict of interest can arise from the need to maintain referral patterns and maintain reimbursement. The patient is unlikely to argue against a smaller incision involving a newer approach, even if the newer approach has not been proven to be as good as the current standard of care.

Dr Alec Patterson, President of the American Association of Thoracic Surgery, highlights in his presidential address a need for a change in our professional behavior from the individual to the team approach to care. This change is likely to be a solution to these potential conflicts. Patients with cardiovascular disease should be offered the benefits of a multidisciplinary team approach. This approach has existed for many years (eg, tumor boards and transplant selection conferences) but is not routinely practiced in cardiovascular surgery. A multidisciplinary approach requires that a regular meeting take place at which all of the consultants are present to review the data, discuss what each can offer, and propose a therapeutic plan. Such an approach lays the groundwork for the patient to benefit from the expertise of the entire team and the foundation from which all new technologies and therapies can

be evaluated as they continuously surface. The multidisciplinary approach is to medicine what the scientific method is to research: the best defense against conflict of interest.¹ Thus this approach will always keep the patient's best interest at the center of our focus.

Octavio E. Pajaro, MD, PhD
University of Alabama at Birmingham
Birmingham, Ala

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IS EARLY ANTITHROMBOTIC THERAPY NECESSARY IN BIOPROSTHETIC VALVES?

To the Editor:

We read with great interest the contribution by ElBardissi and associates¹ addressing a controversial issue: the need for early antithrombotic therapy in patients with tissue valves. The authors sought to determine whether this therapy was necessary in patients in sinus rhythm with a tissue valve in the aortic position. Their sample of 861 patients is large enough to conclude that early anticoagulation after isolated aortic valve replacement with a tissue valve does not reduce the risk of thromboembolism.

The authors are right as to whether anticoagulation is a must or not in this type of patients and refer to the recent American Heart Association/American College of Cardiology and European Society of Cardiology recommendations. The impactful and classic paper by Heras and colleagues,² summarizing an experience from the Mayo Clinic, led to the consideration of anticoagulation as an adjunct of choice based on a retrospective analysis during a long period of time with special focus on patients with no antithrombotic therapy. The results of the study of ElBardissi and associates¹ give additional light to previous publications confirming that

the 90-day risk of thromboembolism was 5% in both groups with or without anticoagulation. The authors identified classic risk factors for thromboembolic complications, such as advanced age, female gender, short stature, smoking, and a 19-mm valve. We fully agree with this and their final conclusion.

The authors refer to thromboembolism and the lack of randomized studies to confirm their conclusion. That was our concern when we designed our prospective and randomized pilot trial.³ In this cooperative pilot study, 193 patients were randomized to acenocumarol and triflusal (an antiplatelet agent) for primary prevention of thromboembolism early after tissue valve implantation; 93.8% were aortic valves. We³ aimed at evaluating the efficacy and safety of antiplatelet therapy versus acenocumarol with the primary end point of a composite of thromboembolism, hemorrhage, and valve-related mortality. The results of our randomized trial were that the rate of thromboembolic events was not significantly different among groups, thereby confirming that antiplatelet therapy was an equally protective strategy. In addition, there was a statistically significant difference favoring the antiplatelet group in terms of hemorrhagic events. The conclusions of this first reported randomized trial comparing antiplatelet versus anticoagulant therapies were that there was a safer profile with significantly lower bleeding in the antiplatelet group. The results by ElBardissi and coworkers¹ are consistent with these data in terms of protection against thromboembolic events. Despite some limitations in our design that have already been addressed, we strongly believe that early anticoagulation might not be the ideal therapy considering the currently accumulated experience that, of course, includes this very appropriate and updated experience by ElBardissi and colleagues.¹

Finally, similar conclusions were recently reached by Brueck and associates.⁴ They also addressed patients with no risk factors for

thromboembolism. We⁵ also supported this strategy. ElBardissi and colleagues¹ are to be congratulated for their elegant, albeit retrospective institutional analysis that brings additional light to this controversial problem. Once again, there is a need to revise current guidelines that should not be taken as law.

Carlos-A. Mestres^a

José I. Aramendi^b

^aDepartment of Cardiovascular
Surgery
Hospital Clínico University of
Barcelona
Barcelona, Spain

^bDepartment of Cardiac Surgery
Hospital de Cruces
Barakaldo
Bizkaia, Spain

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Reply to the Editor:

We appreciate the comments from Drs Mestres and Aramendi regarding our retrospective institutional analysis,

which identified no difference in the overall incidence of thromboembolic events in patients who electively received anticoagulants after bioprosthetic aortic valve implantation.¹ Although we identified subsets of patients that may benefit from some form of antithrombotic therapy in the immediate postoperative phase (either antiplatelet therapy or a vitamin K antagonist with a goal international normalized ratio of 2 to 3), our findings differ markedly from the American Heart Association/American College of Cardiology (AHA/ACC) and other international cardiac organizations, which recommend anticoagulation with a vitamin K antagonist for the first 90 postoperative days.²

Since publication of the article by Heras and associates³ from the Mayo Clinic that ultimately inspired these aggressive anticoagulation recommendations, there have been a plethora of retrospective studies suggesting that anticoagulation is unnecessary and may be harmful. In fact, Sundt and colleagues⁴ recently updated and re-reviewed the Mayo Clinic series and found that anticoagulation did not provide additional protection from thromboembolic events. Our thorough analysis of the outcomes from the Brigham and Women's Hospital demonstrated that only high-risk groups may benefit from some type of antithrombotic therapy. It should be noted, however, that in these high-risk patients, the optimal form of early antithrombotic therapy is still up for debate.

In one of the few prospective, randomized, multi-institution studies examining this important clinical question, Aramendi and colleagues⁵ identified an important outcome that has not been demonstrated in most single-institution retrospective studies, including ours: patients who receive anticoagulation with a vitamin K antagonist have bleeding complications at a much higher rate than those who are treated with a platelet inhibitor.

Although these findings may be intuitive, they warrant recognition inasmuch as surgeons considering antithrombotic therapy in high-risk patients

should be cognizant of the potential bleeding complications after treatment with vitamin K antagonists in this specific group of patients. Further, high-risk patients in our analysis had a similar reduction in thromboembolic events irrespective of the mode of antithrombotic therapy (aspirin versus warfarin sodium [Coumadin]). These complementary findings suggest that antiplatelet therapy after bioprosthetic aortic valve replacement may provide the optimal balance between efficacy and safety.

The time may have come for the AHA/ACC to reconsider their antithrombotic therapy recommendations after bioprosthetic aortic valve replacement. There now exists a large amount of data that suggest widespread anticoagulation is not indicated, and perhaps more concerning, patients administered vitamin K antagonists may be at a significant risk of major bleeding complications.

Andrew W. ElBardissi, MD, MPH

Lawrence H. Cohn, MD

Division of Cardiac Surgery
Brigham and Women's Hospital
Harvard Medical School
Boston, Mass

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