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IS THE CAUSE OF DEATH IN HYPERTROPHIC CARDIOMYOPATHY LOW PRESSURE GRADIENT IN LEFT VENTRICULAR OUTFLOW?

To the Editor:

We congratulate Schaff and colleagues¹ on their recent study. We wish, however, to emphasize some points that we believe they should have taken into consideration.

We could not figure out how to correlate the preoperatively used drug with the survival rate (see original Table 2¹). To agree with the results, one should standardize the last echocardiographic data of the lost patients with those of the living patients. We think that preoperative echocardiographic status of the patient could not be correlated with the survival of the 6th postoperative year. We could not clearly understand whether it was postulated that the wall thickness of 22 mm (see original Figure 4¹) did not have an impact on survival or whether one would bring the survival to an expected level with the use of drugs? We think

that the original Figure 2 is in contradiction with the original Figure 4.¹

Ommen and associates² previously stated that the pressure gradient does not have an impact on (cardiac) survival because their mortality was also 6% in the nonobstructive group. Nevertheless, there was limited information because of the lack of postoperative echocardiographic data in the myectomy group with respect to postoperative pressure gradient, wall thickness, and left ventricular diameters.

The standardization of the groups after inclusion of the final echocardiographic data of the lost patients would yield the definitive results of this study.

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EARLY SURGICAL TREATMENT FOR INFECTIVE ENDOCARDITIS: DOES IT COME AT THE EXPENSE OF WORSE NEUROLOGIC OUTCOMES?

To the Editor:

With much interest we read the recent article of Funakoshi and colleagues,¹ suggesting superior long-term outcomes for patients with infective endocarditis after early surgical treatment relative to a purported conventional treatment strategy.

Although the results seem in line with general consensus, several methodologic issues arise, affecting the validity of the study's conclusions.

First, we would like to comment on the definition of the study groups. The conventional treatment group includes patients who have been treated with antibiotics only, as well as patients who have been operated on at a later stage. In our opinion, these patients should not be combined into a single treatment group. To illustrate this, the in-hospital mortality is 5% for both the early and late surgical groups. On the other hand, the mortality of the conventional treatment group seems higher (5% vs 13%; $P = .08$), possibly caused by unfavorable results in the nonsurgical group. It would have been more informative to have 3 groups for comparison: patients after early surgical treatment, patients after late surgical treatment, and patients who have been treated with antibiotics only. Correspondingly, it is problematic to interpret the result of the propensity-matched comparison, because it remains unclear how many patients in the conventional treatment group have undergone surgical treatment. To assess the role of early surgical treatment in infective endocarditis adequately, it would be more instructive to compare the results of early surgical treatment with those of late surgical treatment.

Second, the chosen period of 14 days after the initial diagnosis as cutoff point for early versus late surgery seems questionable. Several studies show that the risk of embolic events dramatically drops as early as 1 week of antibiotic treatment.² Accordingly, the European guidelines³ on this specific subject advise that early surgical treatment should be performed within several days after the diagnosis, instead of after 14 days, whenever there is an indication for early operation.

Another point of concern is the postoperative neurologic outcome. Among patients who had complicating stroke on admission, 30% had

either cerebral infarction or hemorrhage after early surgical treatment, compared with 8% in the late operation group. Facing these results, one should keep in mind the recommendations by the Society of Thoracic Surgeons Clinical Practice Guidelines⁴ to delay surgery for at least 4 weeks if possible for patients who have had a major ischemic stroke or any intracranial hemorrhage.

Finally, we are interested in the results of intraoperative valve cultures and pathologic examination of infected valves. How many patients showed traces of active endocarditis during surgery? Was this associated with the fairly high risk of reoperation during follow-up (9%-12%)?

In conclusion, we could say that this study shows a lower in-hospital mortality in the early surgery group at the expense of worse neurologic outcomes. We think that if one does not know the indications for early surgery, a judgment on the outcomes of surgery will be questionable. Referring to these concerns, we consider the data presented not convincing for dropping a patient-tailored approach in favor of a priori early surgical treatment.

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RESCUE CORONARY ARTERY BYPASS GRAFTING IN ISOLATED LIFE-THREATENING RIGHT VENTRICULAR FAILURE AFTER AORTIC VALVE REPLACEMENT To the Editor:

Coronary ostial damage is a rare but potentially serious sequela after aortic valve replacement. It occurs in the left main or right coronary artery after 1% to 5% of aortic valve replacement procedures. This lethal condition may present with difficulty in weaning from cardiopulmonary bypass pump; echocardiographic signs of major wall motion abnormalities; or electrocardiographic evidence of ischemia, pump failure, and ventricular arrhythmias. The outcomes are usually severe and may appear immediately during surgery. The typical treatment in operating is coronary artery bypass grafting.¹

Here we present the case of a patient with bicuspid aortic valve and severe aortic stenosis who underwent Manguan surgery associated with aortic valve replacement with a 23-mm diameter mechanical valve (St Jude Medical, Inc, St Paul, Minn), and cardioplegic solution was administered antegradely. Right ventricular failure unexpectedly occurred in the operating room after aortic valve replacement, and the patient could not be separated from the cardiopulmonary bypass pump. This problem was not resolved by medication. Intraoperative transesophageal echocardiography showed a well-functioning mechanical prosthesis with no evidence of paravalvular leakage, air emboli, interfering mechanical aortic valve with the ostial right

coronary artery or any regional wall motion abnormality. Intraoperative transesophageal echocardiography revealed severe right ventricular failure with normal inferior wall motion despite the major perfusion of inferior segment by the right coronary artery. Preoperative echocardiography showed only mild right ventricular dysfunction before surgery. There was no ST elevation on electrocardiographic monitoring. Finally, the patient underwent bypass grafting of the saphenous vein to the right coronary artery with possibility of right coronary artery obstruction. Interestingly, she was successfully separated from the cardiopulmonary bypass pump, and she was well during hospital stay. The follow-up coronary computed tomographic angiography showed obstruction of the right coronary artery ostium by mechanical prostheses. She was discharged, and her midterm follow-up was uneventful.

When right ventricular failure occurs during aortic valvular operation, inadequate myocardial protection may be the culprit. Other causes of right ventricular failure should be considered, such as air or particulate matter embolization. Right ventricular failure that unexpectedly occurs during an aortic valvular operation most probably would be due to a mechanical problem with the right coronary ostium.²⁻⁵

We concluded that when right ventricular failure unexpectedly occurs during an aortic valvular operation and does not improve with reperfusion and auxiliary medications, a mechanical problem in the right coronary artery should be considered even with normal motion in inferior wall and normal findings on electrocardiographic monitoring. This rare complication could be life threatening if not promptly recognized. Consequently, it is important to have an high index of diagnostic suspicion. Rescue coronary artery bypass grafting in this situation would be lifesaving.