TABLE 1. Patient and disease profiles

Age	Diagnosis	PAP	TR	Surgery	INR	Tamponade	Surgical management/ pericardiocentesis
34	MS/MR	<60	Moderate	MVR	>7	+	Surgical drainage
38	MS/AR	>60	Severe	DVR + TV repair	>7	+	Surgical drainage
40	MS/MR	>60	Severe	MVR + TV repair	>7	—	Pericardiocentesis
40	MS/MR/AR	>60	Severe	DVR + TV repair	>7	—	Pericardiocentesis
40	MS/MR	>60	Mild	MVR	>7	+	Died

PAP, Pulmonary artery pressure; TR, tricuspid regurgitation; INR, international normalized ratio; MS, mitral stenosis; MR, mitral regurgitation; AR, aortic regurgitation; MVR, mitral valve replacement; DVR, double valve replacement; TV, tricuspid valve.

hemorrhagic pericardial fluid. This kind of pericardial effusion may not be prevented by indomethacin. We have seen 5 patients receiving anticoagulants who had late (>7 days after surgery) pericardial effusions over the past year (Table 1). All these patients had hemorrhagic effusions and high international normalized ratio (INR) values. The pathophysiology of effusions in these patients is not very clearly understood. High peaks in INR values causing prolonged oozing into the pericardial cavity is the commonly accepted theory.² We speculate with Wong and Pugsley³ that congestion of the liver owing to right heart failure or tamponade physiology maybe the triggering factor for high INR values in these patients. Most patients in our experience had high pulmonary artery pressures and tricuspid regurgitation of varying severity (Table 1). Moreover, all the patients are back on anticoagulant dosages similar to their pretamponade dosages, further supporting the fact that transient liver dysfunction may have a role in abrupt increase in INR in the early postoperative period. We use indomethacin in patients who have a pericardial rub associated with pain or electrocardiographic changes suggestive of pericarditis; this is restricted to 2 to 3 days. All patients are discharged when the INR is greater than 1.7 and are reviewed 3 and 14 days after discharge. Indomethacin is a drug with many serious side effects and its use should be selective at best.

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doi:10.1016/j.jtcvs.2011.03.036

Reply to the Editor:

We read the letter by Drs Theodore, Christi, and Christopher. The main point of the critics focuses on postoperative pericardial effusion; however, they argue about the idea of the drug for multiple purposes. One of the important properties of our article is the population involved—patients undergoing aortic surgery.¹ The patients were carefully selected for this study, and the article mainly stated the statistically confirmed data, rather than cardiac surgery experiences. Yes, there were patients who underwent aortic valve replacement besides aortic procedures, who were receiving anticoagulants in the postoperative period. However, these patients were more closely followed up for regulation of international normalized ratio than

routine patients who are receiving anticoagulants. The patients who undergo valve replacement have different pathologic pathways for postoperative pericardial effusion than do patients who undergo aortic surgery.²⁻⁴ In our study, the nature of the postoperative pericardial effusion fluid was serous, not hemorrhagic. Likewise, the nature of drained fluid during pericarditis is usually serous in origin.

In the article we suggested that the inflammatory process takes place after the aortic surgery, whether the patients receive anticoagulants or not. This is a new prospect for an unsolved problem, not a magic bullet for all.

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doi:10.1016/j.jtcvs.2011.05.016