To the Editor.—I read with great interest the recent report by Soong et al.1 detailing the delayed presentation of a gastric perforation (lesser curve) most likely due to transesophageal echocardiography (TEE) during coronary revascularization with cardiopulmonary bypass. The patient required surgical repair with an omental patch during laparotomy. Unfortunately, the patient died in the intensive care unit from overwhelming sepsis after 27 days in the hospital. To my knowledge, this is the first reported case of full-thickness gastric perforation on the lesser curve.2

The question that this case raises is whether there was an indication for TEE in this case. Let us examine the arguments for and against this invasive procedure whose exceedingly rare complication proved fatal in this index case.

The argument against TEE begins with the preoperative echocardiogram that showed no significant valvular disease, and adequate ventricular function with an estimated ejection fraction of 40%. Thus, there was no category I indication (supported by the strongest evidence or expert opinion) as defined by published perioperative TEE guidelines.3 In fact, at our institution, this patient would most likely not qualify for TEE, based on the aforementioned considerations and our conservative approach.

However, the argument for TEE begins with the fact that this patient has category II indications (supported by weaker evidence and expert consensus) for TEE, namely a higher risk of perioperative hemodynamic disturbance and ventricular dysfunction. Nationally, there are many centers where TEE is performed in every cardiac surgical case, regardless of level of clinical necessity. Proponents of this approach cite the impact of TEE on therapy in coronary artery surgery, which is at least 10%, many orders of magnitude greater than the risk of upper gastrointestinal injury such as gastric perforation.2,4

How do we balance this risk–benefit profile of perioperative TEE in cardiac surgery? Would it help to identify clinical risk factors besides obvious pathology in the upper gastrointestinal tract? Would a case registry allow further analysis of these rare but devastating complications?2

There are no easy answers to these questions. Perhaps, the way forward is a case registry, as in the example of perioperative visual loss. It would allow for a more focused examination and analysis of the rare but clinically serious upper gastrointestinal injuries associated with perioperative TEE.

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References

(Accepted for publication March 22, 2007.)