esthetic techniques have steadily evolved rather than undergoing “quantum” change over this time.⁵ Early extubation of appropriate candidates is often feasible,⁶ and we have practiced this where appropriate. Of the 170 patients in our study,¹ 22 (13%) were extubated in theater before admission to the intensive care unit. Some caution is needed, inasmuch as reperfusion pulmonary edema may not reach its peak for 24 to 48 hours after transplant.

The use of protocols and guidelines has consistently been shown to reduce duration of ventilation.⁷ We have recently introduced a guideline such as this at our hospital with the aim of minimizing the deleterious effects of inappropriate mechanical ventilation and unnecessary intravenous fluid administration to achieve improved graft function and facilitate early extubation.

We thank Dr Augoustides for his comments. Progress in this area will follow a collaborative, multicenter, and international approach to further define the best management of lung transplant recipients.

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Iatrogenic coronary stenosis

To the Editor:

Maltais and associates have reminded us of the hazard of selective antegrade coronary perfusion with an intracoronary cannula, which is occasionally appropriate despite the utility of retrograde cardioplegia.¹

Working with DLP Inc. in 1984, we developed a noncannulating coronary cannula to avoid trauma to the ostium and the proximal coronary artery.² The recessed tip is surrounded by a silicone rubber bumper to achieve a seal between the cannula and the aortic wall (Figure 1). If there is calcification of the aortic wall adjacent to the ostium, a seal may not be possible and a second tip, which is convex rather than concave, may be effective and is likely associated with minimal trauma to the ostium (Figure 2). Although the advent of retrograde cardioplegia has greatly reduced the need for direct coronary infusion of cardioplegia, there may be poor delivery of retrograde cardioplegia to the right ventricle and perfusion of the right ostium with this cannula is appropriate. When it is necessary to perfuse previously placed vein grafts, the cannula is also effective. I am not aware of publications supporting the usefulness or safety of this device, but its continued availability from Medtronic Inc. after 20 years suggests that it has a market, and anecdotal communications to me confirm its utility.

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Figure 1. The shaft of the cannula is malleable for optimal positioning with a proximal luer-lok for the cardioplegia line. The tip is recessed within the silicone rubber bumper to avoid ostial trauma.

Figure 2. Several tip configurations are available, but the concave tip is unlikely to injure the ostium, whereas the convex could possibly do so and the basket tip is more likely to do so.

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