area in coronary artery bypass operations is theoretically the best procedure.

Regarding indications for use of bilateral ITAs, our opinion on age limit differs from Dr. Puig's. Our age limit for bilateral ITAs is 75 years in Japan, because the average life span in Japan is 80 years. We assume that it is shorter in Brazil.

Since publishing our report in the Journal, we have continued to use this technique for selected patients. The total number of patients so treated as of November 28, 1996, is 215. Excellent long-term patency of the right ITA grafts via the transverse sinus in Dr. Puig's experience reinforces our results and gives us confidence in using this method.

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Early tracheal extubation after coronary artery bypass grafting

To the Editor:

We read with great interest the report by Cheng and colleagues¹ about early versus conventional tracheal extubation after coronary artery bypass grafting. This subject is of great importance in areas in which resources are limited.

In July 1976 we² published our first article on early extubation in general cardiac surgery. In support of early extubation after valve replacement, Midell and associates³ in 1974 published their experience with 100 cases, and Barash and coworkers⁴ of Yale University, in 1980, showed that only 4% of patients undergoing pediatric cardiac operations required reintubation. In August of 1980, in a thesis to become professor of surgery at the University of Ceará Medical School, Jucá⁵ reported the results in 105 patients undergoing coronary bypass grafting who were subjected to early extubation and 20 patients who were extubated in the operating room. Nowadays, if patients have had mild body hypothermia (30° to 34° C) during perfusion, we prefer to extubate them 1 to 4 hours after arrival in the postoperative intensive care unit. The beneficial effects of early extubation on ventricular performance were demonstrated in 1988 by the group from Duke University.⁶

We appreciate the work of the group from the Toronto Hospital because their subject is of great importance in undeveloped areas like ours in northeast Brazil.

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Reply to the Editor:

I would like to thank Jucá and Monte for their interest and support of our prospective, randomized, controlled trial on morbidity outcome in early versus conventional tracheal extubation after coronary artery bypass graft operations.¹ As correctly indicated in their letter, the practice of early tracheal extubation in cardiac surgery is even more important in places with limited resources in this time of cost containment and environment. As a matter of fact, we² have recently published a comprehensive cost study of early tracheal extubation in patients undergoing coronary bypass, including preoperative heart catheterization costs, physician fees, and all departmental costs from patient admission to discharge from the hospital. This study demonstrated that early tracheal extubation significantly reduces the cost of coronary artery bypass grafting by reducing the variable costs in the intensive care unit, reducing the length of stay in the intensive care unit, and reducing the postoperative hospital stay. This cost study further emphasizes that early extubation in these patients does not increase the postoperative morbidity or the cost of postoperative complications, as major postoperative complications were indeed very costly as documented.² On the subject of resource use, early tracheal extubation resulted in fewer cancellations of cardiac operations by improving the use of the intensive care unit and allowed an increase in the caseload of cardiac surgery.

I congratulate Jucá and colleagues³ on their earlier work and insight on early extubation in cardiac surgery. As indicated in our morbidity article,¹ not only has the routine use of prolonged controlled ventilation in patients undergoing cardiac operations been standard practice for the past three decades, but early tracheal extubation in these patients is not new. Cost containment and efficient resource use force the pendulum back to the debate of early tracheal extubation in patients undergoing cardiac operations. As we indicated in our morbidity article,¹ most of these earlier studies were observational studies, case reports, and retrospective reviews with minimal outcome measurements. The most common