Editorial

Post–Cardiac Surgery Mechanical Support
A Tool for Decision Making

Daniel Marelli, MD; Richard J. Shemin, MD

The report by Hernandez et al in the present issue of Circulation is timely and important. Compiled from the Society of Thoracic Surgeons voluntary database, it comprises an analysis of the largest series of patients treated with mechanical support to date. The authors have reviewed outcomes of 5735 patients who had a ventricular assist device (VAD) placed for low cardiac output after having undergone a cardiac surgical procedure. Remarkably, this represents <0.5% of all cardiac operations. The authors observed significant improvement in outcome for these patients over a recent 10-year study period. Survival improved from 38.5% to 59.2%. Similarly, during the same time period, there was a reduction in major assist-device morbidity of bleeding, stroke, and renal failure. These results are in keeping with those from smaller, single-institution reports.

The authors attribute the improved results to advances in technology and more standardized postoperative care protocols. This has encouraged surgeons to implant assist devices earlier, before occurrence of irreversible end-organ damage. The most important determinant of poor outcome was whether the index procedure was being performed for salvage surgery. Preoperative need for dialysis was also an important predictor of mortality. These observations support those of others.

In summary, Hernandez and colleagues are to be commended for bringing these data to light using the extensive Society of Thoracic Surgeons database. Rapidly deployable devices are currently available in many if not most cardiac surgery centers. Once on support, patients have the option of being transferred to referral centers if transplantation or other advanced care is required. Such hub-and-spoke arrangements represent opportunities for partnerships. Encouraging results such as those reported in the present study should stimulate surgeons to implant devices early in the course of low postoperative cardiac output, before end-organ damage becomes irreversible.
Disclosures
Dr Marelli is an occasional consultant for Abiomed Inc in Danvers, Mass. Dr Shemin reports no conflicts.

References


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