Commentary:

SWIFT-ly Demonstrating Benefits of Minimally Invasive Cardiac Surgery

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**CENTRAL MESSAGE:** Through this multi-center prospective surgically led study we continue to see the benefits of minimally invasive cardiac surgical approaches on overall patient outcomes.

**Central Picture:** Bryan A. Whitson, MD, PhD
In this edition of *The Journal of Thoracic and Cardiovascular Surgery*, Dr. Gosev and his SWIFT study investigator colleagues demonstrate two notable items through their successful completion of a prospective, multicenter, single-arm study in patients eligible for HeartMate 3 (HM3) left ventricular assist device (LVAD) implantation with thoracotomy-based surgical technique (bilateral thoracotomy or partial upper sternotomy with left thoracotomy). The first is adding to the demonstration that surgeons are able to conduct prospective multi-center clinical trials. The second is the continued affirmation that minimally invasive cardiac surgical approaches are beneficial to our patients.

Surgical sciences have long been criticized of surgeons inability to conduct prospective surgical trials. This has been somewhat overcome in new devices where there is no need for change in technique needed. However, to be able to markedly change practice and change from a well-established, reproducible approach to a novel, less invasive approach with a learning curve is much harder to do. This transition from a sternotomy to a thoracotomy approach is commendable and somewhat analogous to the transition from open to laparascopic cholecystectomy. The SWIFT trial and its investigators overcome the COVID-19 era and changes in heart transplant allocation system changes to successfully complete this prospective multi-center study.

The second significant outcome of the SWIFT trial is to build on the experience of the LATERAL trial espousing the benefits of less invasive, thoracotomy approaches to LVAD implantation. The benefits of a less invasive approach to LVAD implantation continue to add to the literature on the benefits of thoracotomy approach to improved outcomes, e.g., less RV dysfunction, shorter length of stay, potentially less need
transfusion. These benefits are likely attributed to a lesser inflammatory response, less pain and improved sternal stability facilitating early mobilization.

In aggregate, the SWIFT study helps to demonstrate the value of surgical investigation and surgeon collaboration to answer important questions for our patients coupled with a concerted, consistent application of minimally invasive cardiac surgical approaches; both of which positively impact our patients.

REFERENCES


