

DURABLE BIVENTRICULAR SUPPORT USING RIGHT ATRIAL PLACEMENT

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Patients with Interagency Registry for Mechanically Assisted Circulatory Support (INTERMACS) levels 1–2 who either have or are at risk for right ventricular failure face significant morbidity and mortality after continuous flow left ventricular assist device (CF-LVAD) implantation. Currently, the options for biventricular support have limited the Total Artificial Heart (TAH; CardioWest, Syncardia, Tuscon, AZ) or Biventricular Assist Device (BiVAD), which uses bulky extracorporeal or implantable displacement pumps. We describe a successful series based on an innovative approach for biventricular support in consecutive INTERMACS levels 1–2 patients utilizing a Heart Ware Ventricular Assist Device (HVAD; Heart Ware, Framingham, MA) in a left ventricular (LV-HVAD) and a right atrial (RA-HVAD) configuration. From June 2014 through May 2016, 11 consecutive INTERMACS levels 1–2 patients with evidence of biventricular failure underwent implantation of a CF LVAD (10 LV-HVAD and 1 HeartMate II LVAD, Thoratec, Pleasanton, CA) and RA-HVAD pumps. A total of 4,314 BiVAD support days were accumulated in our case series. Seven patients have undergone orthotopic heart transplant, whereas 3 are ambulatory and are either waiting transplant or reconsideration for transplantation. There is one mortality case in this case series, which was due to an intracranial bleed from supratherapeutic anticoagulation. Two other patients experienced hemorrhagic strokes, but without neurologic sequelae, whereas no patients have experienced ischemic strokes. There were two episodes of gastrointestinal bleeding. This is the largest series to date involving this approach with outcomes superior to those previously described in patients receiving biventricular support. We conclude this novel therapy is a viable alternative to current practices in the management of biventricular failure.

Biography

Hao A Tran is a Board-Certified Cardiologist, specialized in treating patients with end-stage or advanced heart failure. He cares for patients who require heart transplants and mechanical circulatory support devices, including ventricular assist devices (VADs) and percutaneous ventricular assist devices (PVADs). He is an Assistant Professor in the Division of Cardiovascular Medicine, UC San Diego School of Medicine. He has lectured and coauthored numerous journal articles on advanced therapies in heart failure and the use of VADs. His work has appeared in *Journal of the American College of Cardiology and Circulation: Heart Failure*. He did his medical training in advanced heart failure, mechanical circulatory support and transplant cardiology at UC San Diego School of Medicine. He completed a General Cardiology Fellowship at the Warren Alpert Medical School of Brown University, where he also completed a Residency in Internal Medicine. He earned his Medical degree from Drexel University College of Medicine in Philadelphia. He is Board-Certified in Internal Medicine, Cardiovascular disease and Advanced Heart Failure and Transplant Cardiology.

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