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Annals of Thoracic Surgery

- 1) Biventricular Berlin Heart EXCOR Pediatric Use Across the United States.
Zafar F, Jefferies JL, Tjossem CJ, Bryant R 3rd, Jaquiss RD, Wearden PD, Rosenthal DN, Cabrera AG, Rossano JW, Humpl T, Morales DL. *Ann Thorac Surg.* 2015 Apr;99(4):1328-34.
- 2) Bridge to long-term mechanical circulatory support with a left ventricular assist device: novel use of transcatheter aortic valve replacement.
Ganapathi AM, Hirji SA, Wang A, Patel CB, Gaca JG, Schroder JN. *Ann Thorac Surg.* 2015 Apr;99(4):e91-3.

Journal of American College of Cardiology- Heart Failure

- 1) The Heartmate Risk Score Predicts Morbidity and Mortality in Unselected Left Ventricular Assist Device Recipients and Risk Stratifies INTERMACS Class 1 Patients.
Adamo L, Nassif M, Tibrewala A, Novak E, Vader J, Silvestry SC, Itoh A, Ewald GA, Mann DL, LaRue SJ. *JACC Heart Fail.* 2015 Apr;3(4):283-90
- 2) Left Atrial Decompression Pump for Severe Heart Failure With Preserved Ejection Fraction: Theoretical and Clinical Considerations.
Burkhoff D, Maurer MS, Joseph SM, Rogers JG, Birati EY, Rame JE, Shah SJ. *JACC Heart Fail.* 2015 Apr;3(4):275-82.
- 3) Left ventricular assist devices ramp studies: truth or consequences?
Starling RC. *JACC Heart Fail.* 2015 Apr;3(4):300-2
- 4) Gastrointestinal Bleeding in Recipients of the HeartWare Ventricular Assist System.
Goldstein DJ, Aaronson KD, Tatoes AJ, Silvestry SC, Jeevanandam V, Gordon R, Hathaway DR, Najarian KB, Slaughter MS; ADVANCE Investigators. *JACC Heart Fail.* 2015 Apr;3(4):303-13.
- 5) Gastrointestinal Bleeding in Recipients of the HeartWare Ventricular Assist System.
Goldstein DJ, Aaronson KD, Tatoes AJ, Silvestry SC, Jeevanandam V, Gordon R, Hathaway DR, Najarian KB, Slaughter MS; ADVANCE Investigators. *JACC Heart Fail.* 2015 Apr;3(4):303-13.
- 6) Echocardiographic Ramp Test for Continuous-Flow Left Ventricular Assist Devices: Do Loading Conditions Matter?
Adatya S, Holley CT, Roy SS, Yarmohammadi H, Feng A, Eckman P, Colvin-Adams M, John R, Masri C. *JACC Heart Fail.* 2015 Apr;3(4):291-9.

7) Gold standard in anticoagulation assessment of left ventricular assist device patients?: how about bronze.

Stehlik J, Johnson SA, Selzman CH. JACC Heart Fail. 2015 Apr;3(4):323-6.

European Heart Journal

No VAD related articles in April

Journal of Cardiac Surgery

No VAD related articles in April

Journal of Heart and Lung Transplant

1) **[Systolic blood pressure on discharge after left ventricular assist device insertion is associated with subsequent stroke.](#)**

Nassif ME, Tibrewala A, Raymer DS, Andruska A, Novak E, Vader JM, Itoh A, Silvestry SC, Ewald GA, LaRue SJ. J Heart Lung Transplant. 2015 Apr;34(4):503-8.

This is a single center study examining the relationship between blood pressure prior to discharge and risk of stroke. There were 275 patients who underwent LVAD implantation between 2005 and 2013 who were analyzed. The study dichotomized patients into 2 groups, those with a median systolic blood pressure (SBP) by Dinamap above vs. below 100mmHg from readings taken during the 48hrs prior to discharge. Patient characteristics were similar with respect to other potential risk factors for stroke (hypertension, vascular disease, smoking, BMI, a.fib, history of stroke).

After a median of 16 months of follow-up, the stroke risk was significantly increased in those with a median SBP above 100 mmHg, 16% vs. 7%; with a hazard ratio of 2.5 In addition, when the data was further analyzed adjusting for age, diabetes, and prior history of stroke, higher SBP remained a significant risk factor.

The major limitation of this study lies in the fact that this is a retrospective study with automatic blood pressure measurements. These measurements might actually reflect a mean blood pressure and therefore could represent falsely low systolic numbers. Therefore appropriate blood pressure targets cannot be extracted from this data. Regardless, this paper adds to the growing concern that higher blood pressures in patients with a continuous flow VAD may contribute to an increased risk of stroke.

2) **[A novel pediatric treatment intensity score: development and feasibility in heart failure patients with ventricular assist devices.](#)**

May LJ, Ploutz M, Hollander SA, Reinhartz O, Almond CS, Chen S, Maeda K, Kaufman BD, Yeh J, Rosenthal DN. J Heart Lung Transplant. 2015 Apr;34(4):509-15.

This study evaluated a novel pediatric treatment intensity score (TIS) designed to quantify disease burden (morbidity) in children who are inpatients with severe heart failure who require VAD support. Through expert consensus a scale was developed that addressed 5 domains of functioning: nutrition, respiratory support, activity level, cardiovascular medications, and care environment. The TIS was then used to characterize a retrospective cohort of 39 patients with 42 implants.

Scores were calculated for the 3 days prior to implant, on implant day and then days 3,7,14,21,31,60 and 90 post implant. Trends in the scoring system reflected an improvement over time in patients following implantation, corresponding with the overall clinical impression. This scoring system may represent a useful tool for objectively assessing other heart failure treatment strategies in the pediatric population.

3) Risk models for mechanical circulatory support in children.

Kirklin JK. J Heart Lung Transplant. 2015 Apr;34(4):499-500

- 4) Time to cool off on a hot topic? Let's not forget about evidence when discussing heat-induced pump thrombogenesis.
de Biasi AR, Manning KB, Salemi A. J Heart Lung Transplant. 2015 Apr;34(4):623-4.
- 5) Blood pressure and stroke risk in left ventricular assist devices.
Willey JZ. J Heart Lung Transplant. 2015 Apr;34(4):497-8
- 6) Left ventricular assist device thrombosis in the setting of left ventricular recovery.
Hurst TE, Moazami N, Starling RC. J Heart Lung Transplant. 2015 Apr;34(4):622-3.
- 7) Ventricular assist device thrombosis: A wide spectrum of clinical presentation.
Birati EY, Quiaoit Y, Wald J, Kirkpatrick JN, Goldberg LR, Atluri P, Margulies KB, Eduardo Rame J. J Heart Lung Transplant. 2015 Apr;34(4):613-5.
- 8) Effect of exercise and pump speed modulation on invasive hemodynamics in patients with centrifugal continuous-flow left ventricular assist devices.
Muthiah K, Robson D, Prichard R, Walker R, Gupta S, Keogh AM, Macdonald PS, Woodard J, Kotlyar E, Dhital K, Granger E, Jansz P, Spratt P, Hayward CS. J Heart Lung Transplant. 2015 Apr;34(4):522-9.
- 9) Marital status and survival in left ventricular assist device patient populations.
Wright GA, Rauf A, Stoker S, Alharethi R, Kfoury AG. J Heart Lung Transplant. 2015 Apr;34(4):619-21.
- 10) Histologic analysis of clots in explanted axial continuous-flow left ventricular assist devices.
Prasad SM, Robertson JO, Itoh A, Joseph SM, Silvestry SC. J Heart Lung Transplant. 2015 Apr;34(4):616-8.
- 11) Exercise in heart failure patients supported with a left ventricular assist device.
Jung MH, Gustafsson F. J Heart Lung Transplant. 2015 Apr;34(4):489-96
- 12) Volume 34, Issue 4 Supplement
Refer to issue for VAD related abstracts presented at ISHLT 2015

Circulation

No VAD related articles in April