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Reviews:

ASAIO:

Subxiphoid exchange of HeartMate II left ventricular assist device.

Tchantchaleishvili, Vakhtang; Luc, Jessica G.Y.; Haswell, Joshua; Hallian, William; Massey, H. Todd

Continuous flow left ventricular assist device is increasingly adopted in clinical practice in treatment of end stage heart failure. The LVAD has its own limitation and durability. Device failure, thrombosis, infection necessitating device exchange. The approaches of device exchange either by subcostal incision or median full sternotomy which associated with more mortality and morbidity. The subcostal approach is associated with less mortality and morbidity, however it is associated with more pain and less control of outflow graft. In the subxiphoid approach there is midline muscle sparing incision and offers better access to both inflow and outflow portions of the pump.

The author here, used non muscle dividing alternative to the left subcostal incision. The author also compared different approaches of device exchange.

The author collected 29 patients who require device exchange between 2006 and 2015. The causes of device exchange include device thrombosis, electromechanical pump dysfunction, outflow graft obstruction, inflow graft malposition.

The result showed less intensive care unit and hospital length of stay in subxiphoid approach compared to sternotomy approach

Also on ASAIO:

Pulmonary Arterial Compliance Improves Rapidly after Left Ventricular Assist Device Implantation.

Masri, S. Carolina MD; Tedford, Ryan J. MD; Colvin, Monica M. MD, MS; Leary, Peter J. MD, MS; Cogswell, Rebecca MD

Pump Speed Optimization in Stable Patients with a Left Ventricular Assist Device.

Couperus, Lotte E. MD; Delgado, Victoria MD PhD; Khidir, Mand J.H. MD; Vester, Marijke P.M. MD; Palmen, Meindert MD PhD; Fiocco, Marta PhD; Holman, Eduard R. MD PhD; Tops, Laurens F. MD PhD; Klautz, Robert J.M. MD PhD; Verwey, Harriëtte F. MD PhD; Schaliq, Martin J. MD PhD; Beeres, Saskia L.M.A. MD PhD

JOURNAL OF CARDIAC FAILURE:

Deactivation of Left Ventricular Assist Devices: Differing Perspectives of Cardiology and Hospice/Palliative Medicine Clinicians

Colleen K. McIlvennan, DNP, ANP, Sara E. Wordingham, MD, Larry A. Allen, MD, MHS, Daniel D. Matlock, MD, MPH, Jacqueline Jones, PhD, RN, Shannon M. Dunlay, MD, MS, Keith M. Swetz, MD, MA

End of life care is very important field in medicine. Professional approach is increasingly required as the improvement in medical technology and different devices implanted to help the patients. Left ventricular assist device is one of technology which increasingly used now all over the world to help the patient with end stage heart disease and also as a bridge for cardiac transplant. LVAD can be used as in and out patient with special medical staff training who can take care of those kind of patients. However, most patient with LVAD can die and the device in place. End of life in those patients need a special trainee, how to approach and when to deactivate the LVAD.

The author in this article explore the difference in cardiology and hospice / palliative medicine approach in LVAD deactivation.

The author surveyed 41 items. Members of European society of cardiology-heart failure association, international society of heart and lung transplant ISHLT, the heart failure society of America and American Academy of Hospice and Palliative Medicine.

Between October to November 2011 the survey was sent to 7168 individuals, 440 responded. 391 were cardiologist. Data then was analyzed.

Most of the responders believe the LVAD is life sustaining treatment. Different numbers between cardiology and home palliative medicine were involved in process of deactivation of LVAD. Home palliative medicine, were more comfortable in device deactivation in comparison of the cardiologist.

The author explored the ethical and legal issues in deactivation of LVAD between the cardiology and home palliative medicine. Most of the cardiologist believe that the patients should be imminently dying before device deactivation. Home palliative medicine believed that the patients must be imminently dying to deactivate the LVAD. However, the author noted that in US, LVAD deactivation process is very well established.

CIRCULATION HEART FAILURE

Left Ventricular Assist Device Explantation Evaluation Protocol Using Comprehensive Cardiopulmonary Exercise Testing

Johannes Steiner, Stephanie Wiafe, Janice Camuso, Katherine Milley, Luke T. Wooster, Cole S. Bailey, Sunu S. Thomas, David A. D'Alessandro, Jose P. Garcia, Gregory D. Lewis

<https://doi.org/10.1161/CIRCHEARTFAILURE.116.003694>

Circulation: Heart Failure. 2017

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Preoperative Proteinuria and Reduced Glomerular Filtration Rate Predicts Renal Replacement Therapy in Patients Supported with Continuous-Flow Left Ventricular Assist Devices

Veli K. Topkara, Ellie J. Coromilas, Arthur Reshad Garan, Randall C. Li, Francesco Castagna, Douglas L. Jennings, Melana Yuzefpolskaya, Koji Takeda, Hiroo Takayama, Robert N. Sladen, Donna M. Mancini, Yoshifumi Naka, Jai Radhakrishnan, Paolo C. Colombo

<https://doi.org/10.1161/CIRCHEARTFAILURE.115.002897>

Circulation: Heart Failure. 2016

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EUROPEAN JOURNAL OF HEART FAILURE

None

JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY

None