**THROMBOLYTICS VERSUS PUMP EXCHANGE IN VAD MANAGEMENT: SHOULD WE USE A TAILORED APPROACH?**

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**Objective**: To assess current treatment modalities for pump thrombus.

**Methods**: A systematic review of literature from 1985 to 2017 using Medline and Google Scholar Databases of treatment strategies for pump thrombosis.

**Results**: Thrombus formation is a common complication that affects the mechanical circulatory support population. Post-surgical ventricular debris, emboli secondary to clots in the left atrial appendage and endocardial surface of the LV as well as inflow cannula malposition are all causes for pump thrombosis. Inadequate anti-coagulation and /or anti-platelet therapy can predispose to thrombus formation. Other causes include interaction of prosthetic material with blood, and consequent hematologic, inflammatory, or immunologic responses. Intercellular adhesion molecules, E-selectin, tissue factor and D-dimer have all been shown to be up-regulated status post device implants. Lack of large scale randomized clinical trials precludes guideline - based definitive treatment options. It is therefore still debated what the best options are for treatment of pump thrombosis.

**Conclusions**: Review and analyses of data from the current literature points to a tailored approach on a case by case basis depending on the acuity and clinical status of the patient as both surgical and medical treatment modalities carry considerable risk of morbidity and mortality.