

Presenting Author Information

Name (First, Last, Credentials): Elizabeth Klein, BS

Institutional Affiliation: Ohio University - Heritage College of Osteopathic Medicine

Email Address: lk338118@ohio.edu

Early Career (Defined as physicians, scientists, medical students, and other healthcare providers currently in residency or fellowship programs or within three years of training)? Yes No

Co-author Information

Name: Amanda Beering, MD Email: amanda.beering@thechristhospital.com Affiliation: The Christ Hospital Network

Name: Robert Dowling, MD Email: robert.dowling@thechristhospital.com Affiliation: The Christ Hospital Network

Name: Miriam Freundt, MD Email: miriam.freundt@thechristhospital.com Affiliation: The Christ Hospital Network

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Abstract Topic (must be gender- or sex-specific)

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| <input type="checkbox"/> Preventative cardiology | <input type="checkbox"/> General cardiology | <input type="checkbox"/> Interventional cardiology |
| <input checked="" type="checkbox"/> Heart failure | <input type="checkbox"/> Cardio-oncology | <input type="checkbox"/> Cardio-obstetrics |
| <input type="checkbox"/> Electrophysiology | <input type="checkbox"/> Cardiovascular Imaging | <input type="checkbox"/> Coronary Microvasculature |
| <input type="checkbox"/> Social Determinants of Health | <input type="checkbox"/> Mental Health | <input type="checkbox"/> Precision Medicine |

Title:

Severe Uterine Bleeding During Mechanical Circulatory Support in Postpartum Cardiomyopathy: A New Approach

Background:

Postpartum cardiomyopathy can result in life-threatening cardiogenic shock with the need for mechanical circulatory support (MCS). MCS increases the risk of bleeding due to blood trauma and the need for systemic anticoagulation. Especially in the early postpartum period, MCS presents a risk for severe uterine bleeding (SUB). We present a new treatment strategy for rapid control of SUB in patients on circulatory support devices.

Methods: A 22-year-old female with no past medical history experienced cardiogenic shock eight weeks after vaginal delivery of a healthy daughter. Due to shock with severe end-organ failure, she was placed on femoral veno-arterial extracorporeal membrane oxygenation. After stabilization, she transitioned to a percutaneous left ventricular assist device (axillary Impella 5.5) and percutaneous right ventricular assist device (jugular Protek Duo). Her end-organ function normalized but she showed no signs of myocardial recovery and was listed for heart transplantation. On day ten of MCS she had worsening uterine bleeding which was treated with anticoagulation, cessation, administration of hormonal therapy (medroxyprogesterone and misoprostol) and a pro-coagulant (tranexamic acid). Despite these efforts uterine bleeding persisted, resulting in acute blood loss anemia requiring multiple blood transfusions.

Results:

In order to avoid transfusion of blood products which are known to cause allosensitization, and therefore increase the risk of heart transplant rejection, she underwent successful trans-femoral bilateral uterine artery embolization (UAE). This resulted in rapid hemostasis and allowed for continued MCS until a donor heart became available. She underwent successful heart transplantation and is doing fine seven months after with regular uncomplicated menstrual periods.

Conclusions:

Uterine artery embolization is an effective and safe method to rapidly control SUB in female patients on MCS. If utilized early enough, UAE may allow avoidance of blood product transfusion and continuation of anticoagulation to avoid pump thrombosis.

Tables/Figures/Graphics: Include images that are part of your submission here. Images should be high resolution and have a file type of “gif”, “jpg”, or “jpeg”.