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Peripherally Inserted Left Ventricular Vent and Anticoagulation System (PILVAS)

Value Proposition

Extra-corporeal membrane oxygenation (ECMO) support is a rapidly growing technique to treat patients in severe cardiac distress. As its use increases, incidence of the common complications of support, including significant bleeding, stroke, infection, acute kidney injury, and limb ischemia have become more widely characterized. One of these complications, left ventricle distention, leads to particular poor acute outcomes if not addressed immediately. Fortunately, this can be accomplished by “ventilation” – the insertion of a catheter device directly into the left ventricle to remove the buildup of blood and air, resorting normal cardiac output. However, this invasive technique increases the risk of thrombus formation which has not been addressed by current catheter offerings.

Technology

This invention describes the first left ventricle access catheter with built-in in situ delivery of anticoagulant medication to prevent thrombus formation in the patient.

Advantages

- In situ anti-coagulation delivery combined with ventilation and pressure monitoring
- Decreased risk of complications including thrombosis

