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**Successful Management of Tricuspid Endocarditis with AngioVac in a Non-Surgical Candidate**

**Introduction**

Right-sided infective endocarditis (RSIE) is rare compared to left-sided endocarditis and is often linked with intravenous (IV) drug use1. In non-surgical candidates with large vegetations, alternative strategies may be used to reduce the infective burden. We present a case of successful AngioVac use for tricuspid valve debulking in a 30-year-old male.

**Case presentation**

A 30-year-old male with a history of IV drug use presented with myalgias, pleuritic chest pain and shortness of breath for 14 days. A transthoracic echocardiogram revealed large tricuspid valve vegetation and severe tricuspid regurgitation. Workup showed septic emboli leading to cavitating pulmonary lesions, methicillin-resistant *Staphylococcus aureus* bacteremia, and hepatitis C. A subsequent transesophageal echocardiogram showed a mobile tricuspid vegetation (3.1 x 1.5cm) on the anterior leaflet. Given the patient’s recurrent IV drug use, hepatitis C, and thrombocytopenia, he was deemed high-risk for surgery and prosthetic valve infection if a valve were placed. AngioVac was used to aspirate the vegetation and reduce the infective load. With concurrent antimicrobial therapy, the bacteremia was cleared, though severe tricuspid regurgitation persisted. The patient will receive weekly Oritavancin infusions for six weeks after the last negative blood culture.

**Discussion**

RSIE has a better prognosis than left-sided infective endocarditis, due to reduced systemic embolization and fewer invasive infections. Antibiotics remain the cornerstone of treatment, but one of the indications for surgery is large persistent vegetations that are larger than 20mm1. Our patient was a high-risk candidate, so AngioVac was performed successfully. Originally designed for aspiration of thrombi or emboli, AngioVac and other percutaneous aspiration devices have shown efficacy in debulking large vegetations in non-surgical candidates1. Recent data suggests a 93% survival rate to discharge in stable condition2. This case supports AngioVac as a safe and effective option for managing tricuspid valve endocarditis in high-risk patients.

**Conclusion**

Percutaneous aspiration devices like AngioVac offer a promising alternative for managing large vegetations in RSIE patients who are unsuitable for surgery. However, further investigation through randomized controlled trials and literature review is needed to assess long-term outcomes.

**References**

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