**AN APPROACH TO AVOID SURGERY IN TRICUSPID VALVE ENDOCARDITIS**

**P.R. Pinkhasova,** A.R. Elashery, R. Gallagher, M. Warshofsky

Western Connecticut Health Network - Danbury Hospital, Danbury, CT, USA

**Background**: Tricuspid valve endocarditis characterizes about 5-10% of all infective endocarditis (IE) cases and while most presentations can be treated with antibiotics, complicated cases demand surgery. Guidelines for treatment remain scarce. Cases that involve large vegetations, repeated septic emboli, resistance to medical therapy, aggressive organisms, significant tricuspid regurgitation (TR) and heart failure, may be candidates for a surgical approach. Our case involves a novel, invasive, non-surgical treatment using AngioVac.

**Case Presentation**: We present a 53 year old male with recent prostatitis complicated by development of a perirectal abscess with sepsis due to *Methicillin-Sensitive Staph Aureus*. Transesophageal echocardiogram (TEE) revealed a large 3 cm filamentous echodensity associated with the posterior tricuspid valve leaflet, which prolapsed into the right ventricle resulting in mild TR. Surgery was indicated based on multiple septic emboli, antibiotic course of greater than 2 weeks, persistent > 1cm vegetation, and *Staph Aureus*infection. AngioVac was undertaken given increased perioperative risk in a critical patient. The tricuspid vegetation was vacuumed employing TEE, ultrasound, and fluoroscopy. TEE confirmed no remaining vegetation with trace TR. Despite prolonged intubation, there have been no repeat pulmonary emboli. The patient has been recovering well including proper mentation.

**Discussion**: AngioVac is a 2014 FDA approved venous drainage cannula for removal of fresh, soft thrombi or emboli during a cardiopulmonary bypass circuit via a filter. AngioVac presents a novel and less-invasive option to treat complicated tricuspid valve vegetations. Its use for endocarditis is gaining popularity; previous case series of about 30 patients demonstrated >90 % hospital stay survival with no reinfection. In critical patients, this procedure may avoid the need for open sternotomy, decrease associated perioperative risks and may augment antibiotic response. Further studies are needed to track recurrence and valvular function however, its clinical success opens the road to a minimally invasive option in tricuspid valve endocarditis surgical candidates.