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Angiovac Percutaneous Aspiration of Aortic and Mitral Endocarditis

Intro

Endocarditis is a daunting pathology. Septic shock, cardiopulmonary failure, cognitive compromise, and embolic shower distinguish these from outpatient valve cases. Even in the era of percutaneous and surgical intervention, these patients are not ideal candidate and can further deteriorate despite best medical treatments. In recent years, we have seen percutaneous approach to tricuspid endocarditis, submitted to FDA with Angiovac, AngioDynamics Inc. However, limited case reports are noted on the aortic and mitral endocarditis.

Methods

We report a retrospective case series on the Angiovac application on the aortic/mitral endocarditis (vegetation 1cm plus) on extremely high risk patients in a compassionate use between 2022-2025. Sentinel embolic protection was used.

Results

Eight Angiovac applications were for aortic endocarditis. Patients' STS score was at least 8%. The approach was a retro-femoral arterial. 60% extraction were achieved in 5/8 cases. 30-day mortality: two were made comfort care per family's decision. No technical mortality was noted intraop or within 30 days

Six Angiovac cases were done for mitral endocarditis. The STS score was at least 5%. The approach was transeptal. 70% extraction was achieved in 4/6 cases. 2/6 cases required pericardiocentesis. 30-day mortality: one patient was made comfort care and another passed on pod#15. There were no intraoperative mortality.

Conclusion

Angiovac appeared to be feasible first approach for difficult septic mitral/aortic endocarditis. It should become another option in tackling endocarditis along with IV antibiotics and valve surgery.

Keywords: Angiovac, Angiodynamics, aortic endocarditis, mitral endocarditis, septic shock



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Biography

John C Lin MD, Cardiothoracic Surgery.

Robotic cardiothoracic surgeon with over 10 years of experience (practices in central California, as part of UCSF Health, USA).

Formerly an aerospace engineer at Boeing Co, Los Angeles, California, USA.

Expertise in coronary artery bypass surgery, aortic surgery, ventricular assist device and robotic thoracoscopic segmentectomy and esophagectomy.

Current research focus on left sided endocarditis Angiovac aspiration and lung cancer robotic surgery. Other aspiration include service at Kenya, Africa, Tenwek hospital cardiothoracic institute.