AngioVac Outcome Analysis in Tricuspid Valve Endocarditis

Maya Parekh

James K. Wu MD
Lehigh Valley Health Network, james.wu@lvhn.org

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Maya Parekh, Zachary Appel, Gabriella Gormas, Sajan Patel, Dr. James K. Wu MD

Lehigh Valley Health Network, Allentown, Pennsylvania

Introduction

- Tricuspid Valve Infective Endocarditis (TVIE): bacterial infection of the heart, affecting the tricuspid valve[1]
- Strongly associated with intravenous (IV) drug use[2]
- Avoid open-heart surgery (OHS) due to morbidity of procedure[3]
- Alternatively, use AngioVac cannula system to debulk vegetations and remove thrombi[4]

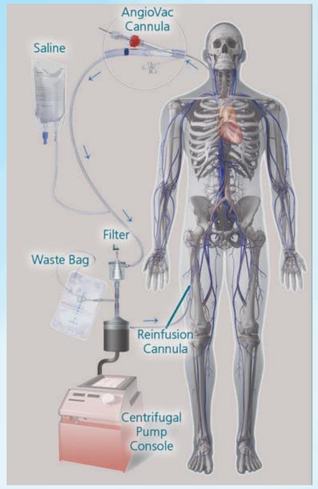

Figure 1: Diagram of AngioVac system[5]

Objective

Evaluate the outcomes of AngioVac use in TVIE within Lehigh Valley Health Network through analysis of post-procedure patient data

Methods

- Constructed unique RedCap database to collect and organize patient data
- Retrospective chart review of all AngioVac patients from Dec 2018 – April 2021
- Populated unique RedCap database with patient data
- Subdivided cohort of 11 TVIE patients and performed analysis

Results

	Number of TVIE Patients	Percentage	Completed Procedures	Complications	Needed OHS
IV Drug User	10	90.91%	9	3	2
Not IV Drug User	1	9.09%	1	0	0
Total	11	100.00%	10	3	2

Table 1: Data for AngioVac Procedures for IV Drug Users and Non-IV Drug Users

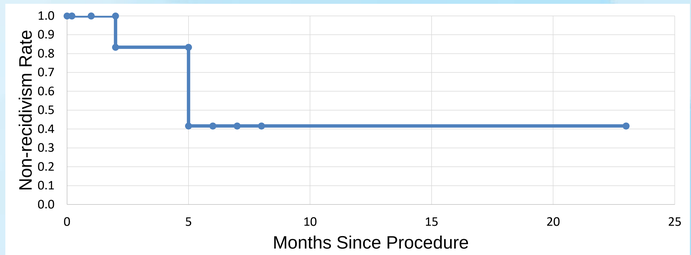

Figure 2: Kaplan-Meier Curve for Substance Abuse Recidivism

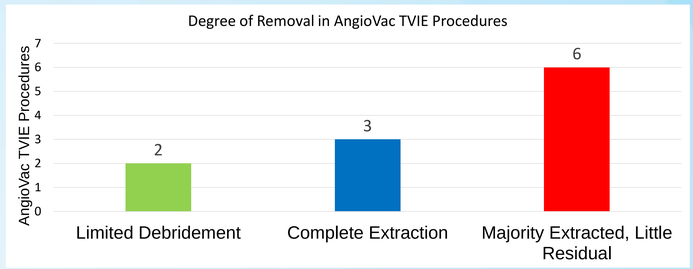

Figure 3: Graphical representation of degree of vegetation and thrombus removal in AngioVac TVIE procedures

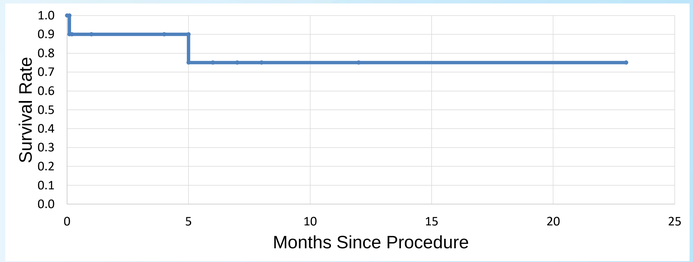

Figure 4: Kaplan-Meier Survival Curve

Conclusions

- Moderately high rate of success in terms of completed procedures, complications, & follow-up surgeries
- Common complications include:
  - Pneumonia
  - Renal failure
- High substance abuse recidivism rate within the first five months post-procedure
- Most procedures resulted in a majority or complete extraction and little to no complications
- Important to understand the efficacy of AngioVac in TVIE when considering treatment options

Future Directions

- Observe outcomes over a longer time period
  - Potential later complications or need for surgery
- Compare degrees of removal based on thrombus and vegetation location
  - Emergence of certain successful techniques

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