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AngioVac Outcome Analysis in Tricuspid Valve Endocarditis
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Introduction

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

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

<table>
<thead>
<tr>
<th></th>
<th>Number of TVIE Patients</th>
<th>Percentage</th>
<th>Completed Procedures</th>
<th>Complications</th>
<th>Needed OHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV Drug User</td>
<td>10</td>
<td>90.91%</td>
<td>9</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Not IV Drug User</td>
<td>1</td>
<td>9.09%</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>100.00%</td>
<td>10</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

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

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

References


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