Treatment of Tracheitis and Antimicrobial Stewardship Interventions

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**BACKGROUND**

- Antibiotics are commonly overused in the treatment of ventilator-associated tracheitis (VAT)
- Antimicrobial stewardship programs (ASP) optimize antibiotic prescribing and decrease unnecessary antibiotic use
- At our institution, clinicians who have initiated antibiotics for the treatment of VAT have a high rate of disagreement with ASP recommendations

**OBJECTIVE**

Compare antibiotic duration and treatment failure in children treated for VAT who did and did not receive an ASP recommendation

**METHODS**

**Study Design:** We performed a retrospective cohort study

**Population:** All children who were hospitalized from 1/1/2009-2/28/2017 and reviewed by ASP for receiving a monitored drug with an indication for VAT. The diagnosis of VAT was based on medical provider documentation in the electronic medical record. Children receiving antibiotics for additional indications were excluded

**Definition:** Treatment failure was defined as a patient requiring a repeat course of antibiotics for a respiratory infection within 14 days of completing the VAT antibiotic course

**Data:** Two data sources
1. ASP data repository: antimicrobials reviewed, antimicrobial indication, ASP recommendation, agreement with ASP recommendation by primary team
2. Electronic Medical Record: Chart review performed to confirm VAT diagnosis per primary team and treatment failure, antimicrobial use

**RESULTS**

- A total of 411 VAT cases were included in the final analysis
- ASP recommendations:
  - No recommendation N=201 (49%)
  - ID already involved N=22 (5%)
  - Stop antibiotics N=99 (24%)
  - Optimize N=38 (9%)
  - Modify N=37 (9%)
  - Consult ID N=2 (0%)
  - 2+ Recommendations N=22 (5%)

- Overall, VAT treatment failure occurred in 11% of cases
- ASP recommendations were agreed upon in 60% of VAT cases

**REFERENCES**


**CONCLUSION**

- Treatment failure for VAT with no recommendations was significantly higher (13.4%) when compared to VAT with stop recommendation (5.1%; p=0.033)
- Of those with ASP recommendations, 16 (8.6%) had treatment failure, compared to 29 (13.0%) for those without recommendations (p=0.157)
- The prevalence of treatment failure was similar when comparing agreement vs. disagreement with recommendations (10.6% vs. 7.1%, respectively; p=0.595)

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