

Invasive Infections due to Groupable Streptococci at a Large Veterans Affairs Hospital: Clinical Characteristics and Outcomes

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BACKGROUND

- Groupable streptococci (A, B, C, etc.) are known to cause a variety of clinical syndromes, including skin and soft tissue infection, primary bacteremia, osteoarticular infection, pneumonia, and endocarditis.
- There is a gap in modern literature on the clinical characteristics and outcomes of patients with infections due to the groupable streptococci.

OBJECTIVES

- The purpose of this study was to identify and characterize infections due to the groupable streptococci at a large Veterans Affairs hospital.
- Our study also aimed to identify risk factors for infection and response to antimicrobial therapy.

METHODS

- Patients were retrospectively identified through the local Infection Control service database.
- Inclusion criteria: Hospitalization between 2016-2020, age >18 years, and growth of groupable *Streptococcus spp* in a clinical specimen from a normally sterile site (excluding urine)
- Exclusion criteria: culture deemed to be positive because of colonization rather than true infection

RESULTS

Table 1: Demographics & Comorbidities (n=75)

Age (median)	63
Male	97%
Caucasian	52%
Diabetes	73%
Peripheral vascular disease	33%
Malignancy	20%
Chronic kidney disease	15%

Table 2: Clinical Characteristics of Groupable Streptococci infections (n=75)

Group A streptococcal infection	7%
Group B streptococcal infection	72%
Group C streptococcal infection	21%
Soft tissue infection	41%
Osteomyelitis	41%
Patient required ICU level of care	16%
Clinical cure rate	83%
Reinfection in less than 1 year	11%
Overall mortality from initial infection	5%

CONCLUSIONS

- The clinical cure rate of invasive infections due to the groupable streptococci at a large VA hospital was 83% in the modern era, even with appropriate source control and correct antimicrobial therapy.
- A significant portion of patients required care in ICU.
- These findings highlight the continued morbidity and mortality of these infections even in the modern era.

FUTURE DIRECTIONS

- Future directions include expanding study to a larger cohort of patients to better characterize patient risk factors and outcomes.
- Further data on disease course and response to treatment, specifically in patients requiring ICU care, is needed to better understand differences in patient outcomes.

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