Title

UTILIZATION OF DALBAVANCIN TO REDUCE ABSSSI ADMISSIONS THROUGH THE ED

Introduction

Acute bacterial skin and skin structure infections (ABSSSI) are a common reason for patients to present to the emergency department (ED) and subsequently get admitted for intravenous (IV) antibiotics therapy. Admissions for ABSSSI are often prolonged because of the need to give IV antibiotics. Hospital admission increases the cost of care for both the patient and the hospital. Admitted patients are also at risk of developing hospital-acquired infections such as central line-associated bloodstream infections. Dalbavancin is a long-acting glycopeptide antibiotic that is approved for ABSSSI and has been used in the ED to reduce patient admissions for the sole purpose of receiving IV antibiotics.

Methods

This is a single-center quasi-experimental retrospective cohort study evaluating the use of dalbavancin in the ED at a non-academic community hospital in New Mexico for ABSSSI. We will compare hospitalization rates of patients receiving standard care compared to patients receiving single-dose IV dalbavancin in the ED. Inclusion criteria are age > 18 years, diagnosis of ABSSSI likely caused by gram-positive organisms, an infection area of > 75 cm2, and no other indication for hospitalization. To be included, patients must also be hemodynamically stable with a normal baseline mental status. Exclusion criteria are any evidence of a more complex infection such as suspected gram-negative organisms or meeting severe sepsis criteria, pregnant or nursing women, and severe allergy to glycopeptide antibiotics. To see a 10% reduction in the hospitalization of patients with ABSSSI, we plan to enroll at least 20 patients over a period of 5 months post-intervention to achieve an 80% power to detect a difference at an alpha=0.01, t-test will be completed post-intervention using JMP software.

Results

Baseline data for 64 patients admitted for ABSSSI without major complications treated with IV antibiotics were evaluated for the period of July 2020 through June 2021. The average length of stay was 3.67 days and a median patient cost was $20,069. The hospital spent a median of $3,063. The rate of hospital readmissions related to cellulitis was 9.38% and the ED/Primary care/Urgent care visit rate related to cellulitis was 6.25%. Data for the intervention group is currently being collected.

Conclusion

ABSSSI admissions contribute to significant length of stay and cost for both the hospital and patients. Reducing admission for ABSSSI for the sole purpose of receiving IV antibiotics has the potential to reduce cost and risk of hospital-acquired infections.