

Abstract

Introduction: In hospitals throughout the United States, emergency department providers consistently see patients arriving for treatment of a variety of skin and soft tissue infections. The Infectious Disease Society of America (IDSA) provides treatment recommendations for different types of skin and soft tissue infection, categorized by different factors including severity of illness and whether the condition is purulent. Providers are encouraged to follow IDSA guidelines, though sometimes select treatment options that stray from these guidelines. This study aims to retrospectively analyze prescribing habits of physicians at Decatur Memorial Hospital in Decatur, Illinois, for adherence to IDSA guidelines.

Methods: Patients were retrospectively evaluated based on several factors including: infection type (purulent or non-purulent), age (in years), presence of diabetes (yes or no), IV antibiotics within the last 90 days (yes or no), gender (male or female), calculated creatinine clearance (indicated by serum creatinine, age and weight during time of admission), treatment administered, duration of treatment (in days) and adherence to IDSA guidelines (yes or no). The primary outcome was the rate of adherence to the IDSA guidelines for purulent and non-purulent infections. Statistics reported based on descriptive analysis.

Results: Analysis of patient data and prescribing habits showed a guideline adherence rate of 74.1% for purulent infections and a guideline adherence rate of 43.0% for non-purulent infections. After analyzing all patient demographics noted during this study, it was found that 6 out of 11 of the patients who had a diagnosis of diabetes received non-adherent treatment to the guidelines. 11 out of the 22 males in the study received non-guideline adherent treatment, whereas 15 out of the 28 females who were studied received treatment that was not adherent with the guidelines. Age was broken down into two groups: 18-59 years of age and over 60 years of age. 15 out of the 40 patients with an age ranging between 18 and 59 received non-guideline adherent treatment, whereas 4 out of the 10 with an age greater than 60 received the non-guideline adherent treatment.

Discussion: Prescribing habits of physicians for purulent infections showed a higher adherence rate to guidelines as compared to non-purulent infections. The poor adherence rate for non-purulent infections may be due to a multitude of factors such as issues in differential diagnosis and lack of prescriber guideline education. When looking at the different patient populations, all demographic statistical analyses were non-impressive and showed no definitive trend.

Conclusion: Overall, there is a gap in guideline-appropriate prescribing habits when comparing purulent to non-purulent infections. This analysis identifies weak points in prescribing habits and the potential for future education to increase guideline adherence and a potential overall improvement in patient outcomes.