INFECTIOUS DISEASES (BACTERIAL, FUNGAL, VIRAL, PARASITIC, INFESTATIONS)

MICROBIOLOGIC CHARACTERISTICS OF SKIN AND SOFT TISSUE INFECTIONS

C Silva [1] - Z Li [2] - A Chen [3] - C Lucas Anthony [3]

St. Vincent Hospital, Internal Medicine, Indianapolis, United States [1] - Florida Atlantic University, Biomedical Sciences, Boca Raton, United States [2] - The Rendon Center For Dermatology And Aesthetic Medicine, Dermatology, Boca Raton, United States [3]

Background: Skin and soft tissue infections (SSTIs) are common in dermatologic practices and are often treated empirically. For clinicians to effectively provide empiric treatment, an understanding of the common causal organisms and sensitivities is necessary.

Objective: To determine the bacterial organisms responsible for SSTIs and their antibiotic sensitivities.

Materials and Methods: Retrospective chart review was performed at a dermatology clinic in south Florida for wound cultures obtained at encounters between January 1, 2010 and September 1, 2016. Patients had to be 18 years or older and have a resulted wound culture with antibiotic sensitivities. Descriptive statistics, including percentage, were used to analyze the data. All percentages were calculated using the total number of cultures (141) unless otherwise specified. Categorical variables were compared using the Chi square test. All statistical tests were two-sided and a p-value less than .05 was considered statistically significant.

Results: 141 cultures were obtained from 127 patients. The cultures grew 175 bacteria. Staphylococcus aureus grew in 56.03% of cultures, and 37.97% of S. aureus were found to be methicillin-resistant (MRSA). Patients >70 were significantly more likely to grow MRSA than patients 18-44 (p=0.0398). Of the cultures obtained from sites below the waist, 26 of 60 grew common gut bacteria, versus 22 of 81 in sites above the waist (p=.045093). 100% of MSSA and 83.33% of MRSA were sensitive to trimethoprim-sulfamethoxazole. Of the gram-negative organisms tested, 88.24% were sensitive to ciprofloxacin.

Conclusions: Monitoring trends in causal organisms of SSTIs can be beneficial to determine appropriate empiric coverage. Compared with previous studies, Staphylococcus aureus was less frequently found in wound cultures in south Florida. Patients over 70 were more likely to have MRSA, and sites below the waist were more likely to grow common gut bacteria. Clinicians should consider local trends such as these when prescribing empiric antibiotics.