A STUDY ON CLINICOMICROBIOLOGICAL PATTERN IN CHRONIC DIABETIC ULCER FOOT PATIENTS

ABSTRACT

INTRODUCTION

Foot infections are one of the major complications of diabetes mellitus and are a significant risk factor for lower extremity amputation. Providing effective antimicrobial therapy is an important component in treating these infections. This study assesses the microbial isolates of patients with diabetic foot infections and their antibioticsusceptibility pattern and to know the outcome in the antibiotic therapy which help in preventing amputations.

PATIENTS AND METHODS

A prospective study of 50 patients with diabetic foot infections admitted to Coimbatore medical college hospitals, Tamilnadu was undertaken. Bacteriological specimens were obtained and processed using standard hospital procedure for microbiological culture and sensitivity testing.
RESULTS

A total of 52 pathogens were isolated. Thirty three percent of patients had polymicrobial infection, Sixty seven (52%) had single organism infections, and two (2%) had no growth. Gram-negative bacteria (67%) were more commonly isolated compared with Gram-positive bacteria (30%). The three most frequently found Gram-positive organisms were Staphylococcus aureus (28%), and the most common Gram-negative organisms were Escherichia coli (32%), Proteus mirabilis (16%). Occurrence of MDRO is 34 percent. Vancomycin was found to be the most effective against Gram-positive bacteria, whereas imipenem and amikacin were most effective against Gram-negative bacteria on antibiotic testing.

CONCLUSION

Forty percent of diabetic foot infections were polymicrobial. S. aureus and Escherichia coli were the most common Gram-positive and Gram-negative organisms, respectively. Amputation rates in those treated patients were 28 percent. This study helps us to choose empirical antibiotics for patients with diabetic foot infections.

KEYWORDS - bacteriological, diabetic foot, Diabetic ulcer, Bacteriological Spectrum, amputation, MDRO