A STUDY ON BACTERIOLOGICAL PROFILE OF PYODERMA IN A TERTIARY CARE HOSPITAL

ABSTRACT

Background and objectives

Bacterial skin infection is one of the common skin problem in dermatology clinics among which pyoderma constitutes a major portion. Pyoderma is known for its chronicity, recurrence and other complications. The management of pyoderma has now become complicated due to the rapid emergence of multidrug resistance among the commonly isolated etiological agents. Thus, this study was carried out to establish the common causes of primary and secondary pyodermas, as well as to determine the antibiotic susceptibility pattern of the isolated pathogens.

Methodology

The present study comprised of 200 randomly selected cases of clinically diagnosed Pyoderma, both primary and secondary, attended the Department of Dermatology, RGGGH, during the study period March 2017-February 2018. Two sterile swabs from skin lesions was taken aseptically and one swab for Direct Gram-staining and other for Culture, done on Nutrient agar,Blood agar and MacConkey agar and incubated at 37° C. Organisms were identified using standard operative procedures. Antimicrobial susceptibility testing was done on Mueller Hinton Agar by Kirby-Bauer Disc Diffusion method as per CLSI guidelines.

Statistical analysis

Data were compiled, tabulated and analyzed using the statistical software SPSS version 16.0. P<0.05 was considered statistically significant.

Results

The incidence of pyoderma in our study was 1.4% with male preponderance and common in 21-30 years of age group (39%). Secondary pyoderma (71%) was more common than Primary pyoderma (29%). Infected pemphigus was the commonest clinical type followed by folliculitis. Majority of the patients belongs to the lower income group. Among 200 samples processed 177 yielded growth whereas 23 samples showed no growth. Out of 177 cases that yielded growth 165 cases showed only one type of organism whereas 12 cases showed two types of organisms. *Staphylococcus aureus* (74.6%), was the most common organism isolated from both primary and secondary pyoderma followed by *Pseudomonas aeruginosa* (5. 8%). S. *aureus* was 100% sensitive to linezolid followed by Chloramphenicol (90.8%), tetracycline (79.4%), Gentamicin (78%) Cotrimoxazole (56.7%)and Erythromycin (43.3%). Most of the isolates were resistant to ciprofloxacin (75.9%) and penicillin (87. 9%).Out of total 141isolates of S. aureus ,113(80.1%) were MSSA and 28(19.9%) were MRSA. Among 28 MRSA isolates ,25(89.3%) were Mupirocin sensitive and 3 (10.7%) were high-level mupirocin resistant. All the Gram-negative isolates showed 100%sensitivity to Imipenem and most of the strains were resistant to one or more antibiotics.

Conclusion

This study gives an indication of the present pattern of bacteriological profile of pyodermas in a tertiary care hospital. With the knowledge of common causative organism and their resistance pattern, proper antibiotic therapy can be given, thus avoiding unnecessary medication and also keep newer antibiotics in reserve for use only when necessity arises. Therefore, timely recognition, and prompt bacterial diagnosis and antibiotic susceptibility testing is very important for the management of pyoderma and also to prevent further major complications

KEY WORDS

Pyoderma; S.aureus; MRSA,Mupirocin