conferenceseries.com

J Bacteriol Parasitol 2018, Volume 9
DOI: 10.4172/2155-9597-C1-047

Bacteriological study of wound infections

P Vijayalakshmi, Rajani Chowdary and J V V S N Murthy
Gandhi Institute of Technology and Management University, India

Wound infections account for nearly 17% of nosocomial infections but contribute up to 7-10 extra post-operative hospital days and from $3000 to $29,000 in extra costs depending on the operative procedure appear 5-7 days after surgery. Superficial infections are less likely to produce fever than infections with deep tissue involvement. The present study was focused on the incidence of various pathogens in different types of wound infections and the variations in their antibiotic susceptibility have been analyzed. A total of one hundred samples were collected randomly from wound infected areas like cellulites, diabetic foot lesions, post-operative wounds and burns etc. for a period of one year. The samples were screened by using various microbiological techniques like Gram staining, cultural methods, biochemical reactions and antibiotic susceptibility techniques. The antibiotic susceptibility procedure and interpretation of results followed according to CLSI guidelines. Out of 100 samples, 65 samples were reported from males and 35 from females which shows the males preponderance. By observing the other demographic variable like age, majority of the infections were noticed in the age group of 50-70 years. The most predominant bacteria in the positive samples were *Pseudomonas aeruginosa* 29%, *Enterococci* sp. 17%, *Staphylococcus aureus* 15%, *Klebsiella* sp. 12%, *Proteus mirabilis* 9%, *Escherichia coli* 7%, coagulase negative staphylococci sp. 6% and *Citrobacter* sp. 5%. Most of the isolated *Pseudomonas aeruginosa* strains showed sensitivity to gentamycin, amikacin, levofloxacin, tobramycin and colistin and resistance to penicillins, cephalosoprins and carbapenems. ESBL production by the microorganisms was confirmed by observing the susceptibility to ceftazidime/ceftazidime-clavulinic acid combination. Carbapenemase production was identified through phenotypic detection method like double-disc synergy test and carbapenem inactivation method. Among the various categories of wound infections, the surgical site infection rate is always on the rise. Certain lapse in the maintenance of aseptic conditions during surgery or after surgery, immune status of the patient, surrounding environmental area, excessive usage of antibiotics etc. are of prime importance. So the burden of the infection rate to some extent can be managed by maintaining good hygienic conditions in the hospital environment to prevent nosocomial infections.

bavisettyvijayalakshmi2@gmail.com