

International Pre Conference Workshop on

Microbial Ecology & Eco Systems

June 28-29, 2018 | Alexandria, Egypt

Bacteriological profile and antimicrobial susceptibility patterns of bacteria isolated from pus/wound swab samples in Gaza, Palestine

Zayed Harara, Hala Abdo, Nahil Rebaia, Sanaa Halies and Khtam Tork

Microbiology Section, Central Laboratory Department, Al-Shifa Hospital, Gaza

The main objective of this study is to isolate and identify bacteria from pus samples received in the Microbiology Lab, Al-Shifa Hospital, Gaza, Palestine, and to determine its antibiotic susceptibility to the commonly used antimicrobial agents that change due to inadvertent use of antibiotics which lead to the emergence of various drug resistant pathogens. A cross-sectional study was conducted using total of 500 pus/wound swab samples collected from patients attending surgical and ICU department in the hospital during March 2018 to April 2018. Standard microbiological culture methods were used, and bacterial colonies were identified using morphological characteristics, Gram's staining, and biochemical testing. The antimicrobial susceptibility testing was performed by modified Kirby-Bauer disc diffusion technique. Out of the 500 pus samples, 380 showed bacterial growth. Gram (+) isolates were recovered from 140 (36.9%) sample of which *Staphylococcus spp* and *Streptococcus spp* were isolated from 81.5% and 18.5% of the samples. Antibiotic susceptibility testing of the Gram(+) isolates revealed that the effectiveness of Vancomycin, Rifampicin, Ciprofloxacin, Clindamycin, Cephalexin, Erythromycin, Ampicillin and Penicillin G was 90%, 88.3%, 70%, 58.3%, 51.6%, 41.6%, 18.1% and 15%, respectively. Gram(-) isolates were recovered from 240 (65.1%) samples of which *Escherichia coli*, *Klebsiella Pneumonia*, *Pseudomonas aeruginosa*, *Acinetobacter baumannii*, *Proteus vulgaris*, *Enterobacter cloacae*, *Citrobacter freundii* and *Chryseomonas luteola* were isolated from 34.1%, 25%, 25%, 8.3%, 5.8%, 4.1%, 2.5% and 2.5%, respectively. Antibiotic susceptibility testing of Gram(-) isolates revealed that the effectiveness of Colistin, Meropenim, Amikacin, Ciprofloxacin and Pipracillin was 29.5%, 65.3%, 59.8%, 42.9% and 22.8%, respectively. These results showed that the most effective antibiotics against Gram (+) bacteria were Vancomycin, Rifampicin and Ciprofloxacin; whereas Ampicillin and Penicillin G were the least effective. Gram (-) bacteria, however, were most susceptibility to Colistin, Meropenim, Amikacin, Ciprofloxacin and Pipracillin.

Keywords: antimicrobials, bacterial infection, Gaza, Palestine, pus

Biography

Zayed Mohammed Harara is a pharmacist. He earned his PhD in Medical Laboratory Science (Clinical Pathology), Tunisia University, Tunisia in 2012, a Master Degree in Medical Laboratory Science (Clinical Pathology), IUG, Palestine in 2006 and Professional Diploma of Quality health management from the Ministry of Health, Palestine in 2015. He worked as a Head of Thalassemia Center, Palestine Avider, and a volunteer in Infection Control Society for graduates of health field, and a Head of Microbiology Section, Central Laboratory and Blood Bank Department, Al-Shifa Hospital, Palestine. He has professional experiences as an active member of the Palestinian Friends Society, and during participation in several activates such as the preparation and the implementation of doctors and nursing training courses, coordination and attended several conferences and seminars in the field.

zayedharara@yahoo.com

Notes: