

## Effective Bacterial Factors in Formation of Post Burn Infection in Burn Ward in Qom

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**Background & Objectives:** Burn wounds are the suitable environment for the growth of infectious opportunist microorganisms. Awareness of effective microorganisms in causing the infection and their antibiotic sensitivity has a fundamental role in precise prevention and treatment of infection. This study aimed at investigating the effective bacterial factors in post burn infections and their antibiotic resistance in burn ward of Nekuei Hospital in Qom.

**Methods:** In this study, the sampling carried out from 70 hospitalized patients in burn ward of Nekuei hospital in a 5-month period. After sampling and bacterial isolation, the biochemical tests were performed to detect the microorganisms based on available standards. Determination of antibiotic resistance model was carried out by Disk Diffusion or Kirby Bauer Methods including antibiotics Co-Trimoxazole, Vancomycin, Ciprofloxacin, Cephalothin, Ceftazidime, Amoxycillin, Amikacin, Gentamycin, Chloramphenicol, Cefazolin, Cefotaxime, Ceftriaxone, Ampicillin, Oxacillin, and Imipenem.

**Results:** In this study, out of 70 samples taken from hospitalized patients in burn ward, 54 (%77.15) wound samples had positive culture. The most prevalence bacteria was *Pseudomonas aeruginosa* with 40 samples (%38.09) causing hospital infection, followed by *Staphylococcus aureus* and *Staphylococcus epidermidis* with 12 (%11.42) and *Enterococcus faecalis* 10 samples (%9.59), respectively.

**Conclusion:** The result of this study indicate that with regard to high prevalence of hospital infections in burn ward, using the new Methods is an inevitable tool for prevention and transfer of infectious agents. Moreover, the use of effective antibiotics such as Amikacin and Gentamycin is vital in the treatment process.

**Keywords:** Infection; Burns; Bacteria; Drug Resistance