Antimicrobial Susceptibility Pattern of Methicillin-Resistant Staphylococcus Aureus in Healthcare Workers at Center of Iran

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Bacground & Objective: *Staphylococcus aureus* has been recognized as an epidemiologically important pathogen which is a great concern in hospital setting as a causative agent of nosocomial infection. Despite antibiotic therapy, staphylococcal infections occur frequently in hospitalized patients and have severe consequences. The spreatd of this microorganism is throngh contaminated hands and nose of healthcare workers. Today main problem whit *Staphylococcus aureus* is resistance to wide range of Antibiotics. Therefor the aim of present study is to determine the susceptibility pattern of *Staphylococcus aureus* isolated from the nose and hands of the healthcare workers.

Methods: Of 250 sampels obtained from the nose and hands of healthcare workers, 34 *Staphylococcus aureus* isolate were recognized. all the isolates were confirm by phenotypic and genotypic (sa442). Antibacterial susceptibility patterns of the isolates to 17 antibiotics were determined by disc diffusion according to the methods of the CLSI.

Result: The results of Antibacterial susceptibility patterns in as follows: mupirocin (100%), vavncomycin (96.97%), linezolid(100%), ciprofloxacin (72.73%), quinupristin-dalfoprictin (100%), rifampicin (76%), chloramphenicol (100%), netilmicin (94%), Levofloxacin (73.53%), tigecycline (62.07%), eicoplanin (87.88%), fusidic acid (94.96%), cefoxitin (73.53%), trimethoprim-sulfamethoxazole (88.24%), tetracycline (50%), erythromycin (56.53%), clindamaycin (62%), gentamicin (73.53%).

Conclusion: In conclusion, the results of the observations described herein show clearly that nasal colonization among medical personnel is a function of various risk factors. Personal hygiene and behaviour may however be the key to reducing colonization and spread of *S.aureus*. Handwashing seems to reduce colonization rate and therefore, it would be proposed that infection control intervention through handwashing be strictly adhered to. Improvement of infection contaminated measure like periodicity of healthcare workers is necessary to prevent of antibiotic resistant *S.aureus* from healthcare workers to patients.

Keywords: *Staphylococcus aureus*; Sa442; Susceptibility Pattern; CLSI