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Title: Drug resistant pattern and prevalence of Staphylococcus aureus in Septicemia; in Shahid Sadooghi specialized & sub-specialized Hospital of Isfahan. (2008-2010)

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Abstract: Background and Objectives: Among bacterial agents involved in septicemia, Staphylococci are at a high importance. Increased emergence and spread of resistant S.aureus are reasons for rational antibiotic therapy. The objective of this study was to determine the local prevalence and antibiotic resistant pattern of S.aureus isolated from patient with septicemia that referred to Shahid Sadooghi Hospital of Isfahan.

Materials and Methods: This study was performed on 2472 patients during two years. Blood samples have taken in BHI media and incubated in 37°C. Then sub cultured on blood agar and EMB agar plates after 24h, 48h, 72h and one week. Differential and microbiological specific tests were done for determining of S.aureus samples. Antibiotic resistant testing was performed on Muller-Hinton agar by using disk diffusion method, according to CLSI criteria.

Results: From 2472 tested blood samples 178 cases (7.2%) had positive cultures (septicemia), that 33 specimens (18.5%) were determinate as S.aureus. Drug resistant tasting performed by common antibiotics, which in order of resistant included: Penicillin 96%, Clindamycine 69%, Oxacillin 66%, Erythromycin 57%, Cefotaxime 54%, Gentamycin 54%, Imipenem 45%, Co-trimoxazole 42%, Amikacin 30%, Vancomycine 6%.

Conclusion: The results of our study showed that 18.5% of septicemia caused by S.aureus in this area. The increase in the infections caused by S.aureus and the development of resistant strains has made this pathogen one of the most challenging hospital infective agents. It seems that appropriate prescription of effective antimicrobial drugs with minimum of spectrum, based on standard antibiogram tests, can prevent the outcomes of infection as well as spread of resistant strains.

Antibiotic, Drug resistant, Staphylococcus aureus, Septicemia

Presentation: Poster