Study of antimicrobial hesistance mechanisms of nosocomial staphylococci isolated from pediatric intensive care unit

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SUMMARY129SummaryNosocomial infection is one of the most common causes ofmorbidity among hospitalized children especially those in pediatricintensive care unit (ICU).S.aureus is a common human pathogen responsible for a plethoraof infections, from superficial skin infection to life threatening diseasessuch as endocarditis, sepsis and pneumonia.This work done to study the problem of nosocomial infection inour PICU including, identification of the commonest organismsimplicated, studying the variable clinical types of nosocomial infectionand possible risk factor for its development infection trying to find thesource of nosocomial for future planning of preventive measures for thisimportant infection in our ward.Detection of the mechanisms of resistance of S.aureus to manyantibiotics as methicillin vancomycin and macrolides.This study included 600 diseased patients admitted to PICU, Allpatients have been evaluated on admission & 4-5 days later in order todetect any hospital acquired infection, initial investigation were done onadmission to exude community acquired infection CBCCRPbloodSUMMARY130cultures and these investigation were repeated 4-5 days later to detectany hospital acquired infections.from 600 patients included 150 cases (25%) had nosocomialinfection. 50% of them was infant less than one year. Staphylococcirepresent 33.3% of organisms that cause nosocomial infection.Staphylococci isolated mainly from the skin 30.0% the number ofMRSA isolated from S.aureus 17 cases 42.5% 74% of the staphylococcalrespiratory infections isolates were from patients on mechanicalventilation and 83.3% from staphylococcal blood stream infectionisolates were from patients on central venous line.The comparable disk diffusion susceptibility testing resultsbetween methicilin & cefotaxime & ampicillin is explained on the basisthat MRSA strains are also resistant -to other B-lactam drugs. ControlledMRSA testing results must be expressed on all B lactam drugs (Includingcephalosporins & carbapenems)In our study there is no VRSA all S.aureus strains are sensitive tovancomycin 100%SUMMARY131There is compined resistance of MRSA against erythromycincefotaxime, ampicillin on the basis of transfer of erythromycin genethroughout the plasmid with MRSA gene .Control of hospital acquired infection by hand washingwearinggloves cleaning the environment minimal invasive technique andeducation of health care team are the most important factors forreduction of nosocomial infection .Rational use of antibiotics is very critical for the control andprevention of antibiotic resistance by

education the physicians andpharmacists is very basic measure.