A study on pediatric nosocomial methicillin-resistant Staphylococcus aureus in Lagos, Nigeria

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ABSTRACT

This work was undertaken to determine the incidence of nosocomial methicillin-resistant Staphylococcus aureus (MRSA) infections in children at a tertiary hospital and the antibiotic susceptibility profiles of MRSA compared with methicillin-sensitive (MSSA) strains. From 1994 to 1995, 4,981 admissions in the neonatal intensive care, paediatric surgical, general paediatric, and the well–baby wards of the Lagos University Teaching Hospital were prospectively monitored for nosocomial S. aureus infections. Antibiotic testing was performed on a total of 175 isolates of S. aureus obtained from 169 patients with nosocomial infections (NI) using a disk diffusion method and by E test (AB Biodisk, Sweden). In total, nosocomial MRSA infection was identified in 96 (1.9%) patients, rates recorded for patients in the various wards as stated above were 4.2%, 3.2%, 0.5% and 0% respectively. Correspondingly, the rate of nosocomial MRSA amongst all S. aureus infections was 63.6%, 44.7%, 41.7% and 0%, and 54.9% overall. All MRSA and MSSA were sensitive to ciprofloxacin and vancomycin. Clindamycin and rifampin (87-98%) were also highly effective against MRSA and MSSA, 78.3 % of MRSA and 91.7% MSSA were sensitive to fusidic acid. Gentamicin (70.9%) and erythromycin (65.8%) were also active on MSSA. Cotrimoxazole had low activity against all the strains. Following the high rate and multiresistant nature of nosocomial MRSA obtained in this study, there is need for intensive surveillance of such infections and initiation of stringent control measures in Nigeria and Africa at large. © 2007 International Formulae Group. All rights reserved.

Keywords: MRSA, nosocomial infections, susceptibility profiles.