INTRAHOSPITAL VARIATION OF THE BACTERIOLOGY OF NOSOCOMIAL INFECTIONS BETWEEN THE NICU AND OTHER ICUS

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Objectives: To determine the bacteriology of nosocomial infection within the neonatal intensive care unit (NICU) of Hospital Universiti Sains Malaysia (HUSM) and compare it to other intensive care and high dependency units (ICU/HD) in HUSM.

Methodology: All records of cultured organisms from the NICU and ICU/HD in HUSM were retrieved from the microbiology database. Bacteria cultured from patients, more than 48 hours after admission were considered nosocomial. Separate analyses were performed for all cultured nosocomial organisms and for those of blood cultures only.

Results: Gram negative results were more common in the ICU/HD than in the NICU (68.0 vs 53.0 %; p <0.001). Among the commonly isolated Gram negatives, ICU/HD had in comparison to NICU more acinetobacter sp (33.0 vs 1.7 %; p<0.001), Acinetobacter Baumanii (7.6% vs. 5.7 %; p=0.151) and Pseudomonas aeruginosa (20.5 vs 15.6 %; p=0.012). Compared to ICU/HD, the NICU had more E. Coli (3.7 vs 7.9%; p<0.001) and Klebsiella Pneumoniae (13.2 vs. 37.2%; p<0.001). Among the Gram positive organisms Staphylococcus Aureus (39.1 vs 15.6 % p<0.001) was more common in ICU/HD and Coagulase negative staphylococci (30.7 vs 55.3%; p<0.001) were more common in NICU. The results for blood cultures only, were similar but some of the differences were still more pronounced.

Conclusion: The bacteriology of nosocomial infection differs significantly among wards within HUSM. Rational antibiotic policies should be ward-specific within the same hospital. Adequate hand washing upon entry of the NICU is essential to avoid import of a different nosocomial flora.