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Paper Poster Session

Prevention of hospital and healthcare-associated infection

Aetiology and frequency of risk factor for late onset neonatal sepsis in a IIIb level NICU

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Background: To analyze the presence and duration of the most important risk factors for late-on set sepsis (LOS) in neonates with nosocomial sepsis during their admission in a Neonatal Intensive Care Unit (NICU), as well as the etiology and profile of resistances.

Material/methods: Clinical information from 147 neonates with LOS was collected in our level IIIb NICU during the study period (January 2010 – December 2014).

Results: The incidence of LOS was 6 %, and the incidence density of 4 cases /1000 admission-days. Ninety-nine patients, out of 147 (67%), received parenteral nutrition with a median of 8 days (interquartile range (IQR): 5-14); thirty-five (24 %) needed mechanical ventilation, with a median of 7 days (IQR: 5-26); in 135 (92 %) a venous central catheter was in use, with a median duration of 10 days (IQR: 6-23). The most frequent isolated microorganisms were *Staphylococcus epidermidis* (30%), *Klebsiella pneumoniae* (14%) and *Escherichia coli* (8%). All fungi isolated were *Candida spp* (*C.albicans* 4% and *C.parapsilosis* 4%). Strains of gram positive bacteria were resistant to cloxacillin (51%), vancomycin (8%), and gentamicin (62%). For gram negative bacteria were resistant to gentamicin (19%), third generation cephalosporins (18%), and carbapenems (6%). All the yeast isolated were sensible to amphotericin B and fluconazole. Median days of antibiotic treatment after the beginning of LOS was 28 (IQR: 16-50). These patients were admitted during a median of 39 days (IQR: 19-63).

Conclusions: The main risk factor for developing LOS was to carry a venous central catheter. The second most common was to receive parenteral nutrition. The most commonly isolated microorganism was *S. epidermidis*, followed by *K. pneumoniae* and *E. coli*. The incidence density of LOS in our patients was in the superior limit of previously published studies.