

Emergence of multidrug-resistant gram-negative organisms in a neonatal unit and the therapeutic implications

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Abstract:

Multidrug-resistant organisms are increasing worldwide. Over the years we have noted increasing resistance of organisms isolated in our neonatal unit. There is a need therefore to scrutinize the problem so as to be able to plan for the future. Over a 5-month period, 716 infants were admitted of which 192 were screened for sepsis. Overall, 121 (16.7 per cent) had positive blood cultures. The predominant organisms were Gram negative (73.6 per cent of isolates) with Klebsiella species topping the list at 31 per cent. Case fatality for infants infected with Gram negative organisms was 41 per cent. Resistance to gentamicin was 20 per cent chloramphenicol 23.6 per cent, and amoxicillin/ampicillin 66.3 per cent. Of worry is the resistance to ceftazidime 19.1 per cent, and cefuroxime 21.3 per cent, with the figures rising to 27 per cent when more specialized tests are done (disc approximation and potentiation tests). If these drugs cannot be used in 20-27 per cent of cases then the situation is serious. The contributory factors to increased resistance include: non-investigation of infants put on antibiotics (50 per cent of cases); prolonged (73 per cent) and sometimes unjustified (41.7 per cent) use of antibiotics; and non-utilization of investigations when these are done (52 per cent) together with the delay in getting results back in the ward (6 days).