igella gastroenteritis at a public teaching hospital in Nairobi, Kenya

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Abstract:

Objective: To measure the proportion of nosocomial diarrhea cases associated with Salmonella and Shigella species. Design: Prospective 6-month survey. Setting: Tertiary care center in a developing country. Patients: Pediatric and adult patients admitted within the previous 24 hours and all consenting adult or pediatric medical patients with nosocomial diarrhea. Outcome Measures: Prevalence of Salmonella and Shigella species isolated from rectal swabs at admission and among subjects with nosocomial diarrhea. Results: Salmonella species and Shigella species were isolated from 3.0% and 2.5%, respectively, of 667 patients screened on admission. All admission Salmonella isolates were identified in children under 13 years of age; Shigella prevalence was similar for children and adults. Children with Salmonella at admission were significantly older and more likely to have diarrhea, fever, and some indicators of malnutrition than those from whom Salmonella was not isolated. Salmonella and Shigella were isolated from rectal cultures in 36 (10%) and 9 (2.5%) of 360 nosocomial gastroenteritis cases, respectively. Nosocomial cases occurred equally in adults and children. In adults, nosocomial Salmonella acquisition was associated with sharing a room with a diarrhea patient and previous institutionalization. In children, it was associated with recent antimicrobial therapy, crowding at home, and age between 6 months and 6 years. Nine (41%) of 22 nosocomial Salmonella cases in adults occurred in patients with human immunodeficiency virus-type 1 (HIV-1) infection, while none of 79 HIV-1positive patients had Salmonella isolated at admission. Conclusions: Salmonella is a frequent cause of nosocomial gastroenteritis in this tertiary care institution in a developing country. Risk factors appear to differ for children and adults, and HIV-1-infected subjects may be at increased risk of acquisition. Control measures feasible for the limited resources available to such institutions require evaluation.