immunity to intestinal infections

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Abstract:

The purpose of this study was to compare immune response in breast and non breastfed children presenting with diarrhoea at Paediatric Observation Ward, Kenyatta National Hospital (KNH-POW) and Maternal and Child Health Clinic, Pumwani Maternity Hospital (PMH-MCH). Blood and stool samples were collected from the first four consecutive children aged 5 years and below per day, presenting with or without diarrhoea from January to December, 1992. The stools were tested for total IgA by single radial immunodiffusion (SRID) and specific IgA by enzyme linked immunosorbent assay (ELISA). Peripheral blood CD4 and CD8 enumeration was done by flow cytometry. Stools were cultured for bacteria on selective media while ova and cysts of parasites were identified by wet preparation microscopy. A total of 457 children were enrolled into the study, 69.6% of whom presented with diarrhoea. Breastfed children tended to have a shorter duration of diarrhoea than either mixed fed or bottle fed (8.3 vs 9.8 vs 11.2 days, $p = 0.2$). In general, E. coli were more commonly isolated from breastfed than mixed fed or bottle fed (56.7% vs 43.9% vs 28.9%, $p = 0.004$) while intestinal parasites were mostly in bottle fed than mixed or breastfed children (28.8% vs 8.2 vs 0.8, $p < 0.004$). However, when children with diarrhoea were considered, E. coli was more frequently isolated from bottle fed children who presented with diarrhoea than without (26.7% vs 7.7%, $p = 0.03$).(ABSTRACT TRUNCATED AT 250 WORDS)