Mixed infections in childhood diarrhoea: results of a community study in Kiambu District, Kenya

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Abstract:

One thousand four hundred and twenty diarrhoea specimens from 846 children aged 0 to 60 months were collected and analysed for bacteria, parasites and rotavirus over a 16 month period, from June 1985 to September 1986 inclusive. The study was conducted in 4 villages situated in Kiambu District, Kenya. All the specimens were analysed for rotavirus and parasites, including Cryptosporidium. The majority of the specimens were analysed for enteropathogenic Escherichia coli (EPEC), Shigella, Salmonella, Campylobacter and Aeromonas. Only 387 specimens were analysed for enterotoxigenic E. coli (ETEC). However, of this proportion analysed for ETEC, 33% were positive. A total of 344 specimens were negative for any organisms while a further 140 were only positive for parasites which have been implicated as being pathogenic, including Ascaris lumbricoides, Hymenolepis nana, Trichomonas hominis and Blastocysts hominis were considered to be at least potentially pathogenic and capable of causing diarrhoea. An average of only 29.4% of these organisms occurred as single isolates. The remaining infections were mixed, with a maximum of 7 potentially pathogenic organisms occurring together in a single specimen. The associations of certain organisms were significant, notably Campylobacter with Giardia lamblia. Campylobacter with EPEC, EPEC with Ascaris, and G. lamblia with rotavirus. The latter was a negative association.