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Probiotics in the treatment of infectious diarrhea in children

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Diarrheal disease remains a leading killer of young children and is estimated to account for 15% of cause-specific mortality among children below 5 years of age, a rate exceeded only by acute lower respiratory infections (18%).Current management of diarrheal illness involves prevention and management of dehydration using oral or intravenous rehydration, as appropriate. However rehydration fluid does not reduce the duration or severity of diarrhea which is a major concern for the parents or care givers. It has been hypothesized that Probiotics agents which are live microbial organisms might be efficacious in reducing severity of acute diarrhea. Probiotics, mostly lactic acid bacteria such as *Lactobacilli* and *Bifidobacteria* but also the yeast *Saccharomyces boulardii*, have been investigated in several double-blinded, randomized, placebo-controlled studies; several well-conducted meta-analyses have also been conducted. Lactobacillus GG in particular, have been found to reduce by approximately one day the duration of diarrhea in rotavirus induced diarrhea, shorten the initial phase of watery stools, and reduce hospital stay; this effect is best documented in viral diarrheas. However, these studies have been conducted primarily in developed countries where diarrheal illness is less severe than in developing countries. Recent trials conducted in developing countries with another probiotic strain, Lactobacillus paracasei have yielded no effect in rotavirus diarrhoea but a beneficial effect in children with non rotavirus or non cholera diarrhoea presumably with ETEC and EPEC infection. Larger and better-designed studies of probiotics are therefore necessary to define potential candidate microorganisms for prevention and treatment of diarrhea in communities where diarrhea is associated with a protracted or severe course leading to secondary immune deficiencies and malnutrition. A review of current evidence regarding the use of probiotics in infectious diarrhea in children will be presented.

Biography

Shafiqul Alam Sarker has completed his MBBS from Bangladesh in 1977 and MD from Switzerland in 1991. He has obtained his PhD from Karolinska Institute, Sweden in 2006. At present he is a Senior Scientist and Gastroenterologist of the International Centre for Diarrhoeal Diseases Research, Bangladesh (icddr,b), Dhaka, Bangladesh. He is an author of more than 65 peer reviewed papers and few book chapters.

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