

determined on study day 3 and 7. Daily and total (day 1-7) food intakes were comparable among the study groups. The stool volume (mL.kg.d) mean \pm SEM) was significantly less in infants receiving rice-based reduced osmolality ORS than the WHO-ORS on day 4 (86 \pm 11 vs. 44 \pm 28, p=0.05), 5 (73 \pm 10 vs. 144 \pm 31, p=0.04), 6 (60 \pm 9 vs. 139 \pm 31 p=0.02), 7(59 \pm 11 vs. 120 \pm 59, p=0.04), as well as for the entire (1-7 d) study period (523 \pm 54 vs. 932 \pm 177, p=0.04). The median stool frequency (number/d) during the entire study period in children receiving reduced osmolality ORS was also significantly less than those in the WHO-ORS group (70 \pm 5 vs. 92 \pm 10, p=0.05). Furthermore, the children belonging to reduced osmolality ORS required less amount of ORS in total compared to the WHO-ORS groups. Children in both the groups maintained normal serum electrolytes as determined on day 3 and 7.

Conclusion: It is concluded that rice-based reduced osmolality ORS is more effective than WHO-ORS for replacement and reducing ongoing stool loss, and therefore, may be useful in the management of children with persistent diarrhoea.

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Intestinal Transport of Different Electrolyte Solutions Across Small Intestine of Rabbit *in vivo*

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Objective: Determine the relative effects of different electrolyte solutions in optimizing intestinal absorption of water and electrolytes.

Methodology: The rice electrolyte solutions, called CeraLyte 90 contained 40 g rice and 90 mM sodium, and CeraLyte 70 contained 40 g rice and 70 mM sodium per litre of solution. Different concentrations of carboxymethyl cellulose CMC (10.0, 5.0, and 2.5 g/L) were added to standard oral rehydration solutions (Std ORS) to increase its viscosity. Fifty-centimetre small intestinal segments were perfused with different electrolyte solutions, containing 6 g/L polyethylene glycol (MW 4000) as a non-absorbable marker.

Results: Mean \pm SE of water and sodium ion absorption with standard ORS vs. CeraLyte 90 was 1.53 \pm 0.11 vs. 1.59 \pm 0.09 mL/min/g of dry intestine (NS) and 0.24 \pm 0.21 vs. 0.58 \pm 0.09 mM/min/g of dry intestine respectively. The absorption of potassium and chloride ions was not different when compared among Std ORS, CeraLyte 90, and CeraLyte 70. Secretion of sodium ion was found when the rabbit was perfused with the electrolyte solutions, containing different concentrations of CMC. Water absorption and sodium ion secretion from electrolyte solution with 5 g/L CMC was significantly different when compared with the solution with 10 g/L CMC (p=0.01 and 0.0004).

Conclusion: It is concluded that CeraLyte 90 and CeraLyte 70 have no additional absorption-promoting effect on water and electrolytes transport. Increasing viscosity of electrolyte solution may cause stimulation of secretion across the small intestine of rabbit.

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