Intravenous or nasogastric rapid rehydration for children with gastroenteritis?

Turner T

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Authors' objectives
This aim of this report was to assess whether in children with gastroenteritis, rapid rehydration by nasogastric methods is as effective and safe as intravenous rapid rehydration.

Authors' conclusions
The three included studies (Nager and Wang 2002; Gremse 1995; Vesikari, Isolauri & Baer 1987) concluded that rapid nasogastric rehydration was as effective as intravenous rehydration.

It is important to note however that a wide range of poorly documented rehydration methods were used particularly in regard to IV rehydration. In the study by Nager and Wang (2002) IV rehydration took place over three hours at a rate of 50ml/kg normal saline. Gremse (1995) reported IV rehydration at a rate sufficient to replace the patients estimated fluid deficit over 6 hours, however duration of IV rehydration (mean SEM) was 7.1 1.2 hours and after rehydration patients received Pedialyte to replace ongoing losses. Vesikari, Isolauri & Baer (1987) used an IV rehydration protocol aimed at replacing 2/3 of estimated fluid loss in 6 hours and remaining deficit in following 6 hours.

Defining what constituted rapid rehydration was a particular difficulty of this review, with many different definitions used in the literature. We have included the study by Vesikari, Isolauri & Baer (1987) for completeness however the rehydration protocol used in this study, may not satisfy the current clinical definition of rapid rehydration in all contexts.

We have chosen not to report on the cost-effectiveness data included in the studies by Nager and Wang (2002) and Gremse (1995) as this data is particularly difficult to generalise to different healthcare settings and the approach used for cost-effectiveness analysis was not well described in either article.

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