Vitamin A for the treatment of children with measles—a systematic review.

D'Souza RM¹, D'Souza R.

Author information
1 National Centre for Epidemiology and Population Health, The Australian National University, Canberra, Australia. reddie.souza@anu.edu.au

Abstract
Vitamin A deficiency is a recognized risk factor for severe measles. WHO and UNICEF have recommended vitamin A for the treatment of measles but there are children still dying from measles. A systematic review, including the use of meta-analysis was done of randomized controlled trials comparing vitamin A with placebo obtained from a systematic search of the medical literature to determine whether vitamin A prevents mortality and pneumonia-specific mortality in children with measles. We identified five trials conducted in Africa, four in hospitals and one in a community that met the inclusion criteria. There were 445 children aged 6 months to 13 years supplemented with vitamin A and 478 with placebo. There was a 39 per cent reduction in overall mortality when vitamin A was used for the treatment of measles but this was not statistically significant (relative risk 0.61; 95 per cent confidence interval 0.32-1.12). When stratified by dose, 200 000 IU of vitamin A given for 2 days was associated with a reduction in overall mortality (0.36, 0.14-0.82) and pneumonia-specific mortality (0.33, 0.08-0.92) in hospitalized children in areas with high case fatality. Greater reduction in mortality was observed in children under the age of 2 years (0.17, 0.03-0.61). On the other hand, a single dose of 200 000 IU of vitamin A was not associated with reduced mortality (1.25, 0.48-3.1). There were no trials comparing a single dose with two doses of vitamin A. There were not enough studies to separate out the individual effects of age, dose, formulation, hospitalization and case fatality in the study area. We conclude that 200 000 IU of vitamin A repeated on 2 days should be used for the treatment of measles as recommended by WHO in children admitted to hospitals in areas where the case fatality is high.

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