

Single-dose Intravenous Ondansetron in Children with Gastroenteritis: A Randomized Controlled Trial

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Abstract

Objective: To evaluate the efficacy of ondansetron for the treatment of vomiting and thus reducing the need for intravenous (IV) rehydration in children with gastroenteritis.

Design: Double-blind, placebo-controlled, randomized trial.

Setting: Pediatric ward of An Giang General Hospital, South Vietnam, between December 2013 and June 2014.

Participants: 61 inpatient children (age 11-60 mo) suffering from gastroenteritis with vomiting. Exclusion criteria were: underlying chronic conditions, immunodeficiency, malnutrition or history of allergy to ondansetron.

Intervention: Single bolus of IV ondansetron at a dose of 0.2 mg/kg or placebo.

Outcome measures: Proportion of patients who needed IV rehydration, proportion of patients with cessation of vomiting, amount of oral dehydration solution intake, duration of diarrhea and the length of hospital stay.

Results: After drug administration, 22 (73%) of the 30 patients in the ondansetron group had complete cessation of vomiting compared with 7 (23%) of the 31 patients in the placebo group (RR 0.32; 95% CI 0.16 to 0.63, $P < 0.001$). 3 (10%) patients in the ondansetron group required IV rehydration as compared with 12 (39%) in the placebo group (RR 0.51; 95% CI 0.33 to 0.79, $P = 0.009$). The median amount of oral rehydration solution intake in 24 hours was significantly greater in the ondansetron group (450 mL vs 350 mL, $P = 0.019$). The duration of diarrhea and the length of hospital stay were not different between the two groups.

Conclusion: In hospitalized children having gastro-enteritis associated with emesis, ondansetron is effective in the cessation of episodes of vomiting and in lowering the rates of IV rehydration, without reducing the duration of diarrhea and hospital stay.

Keywords: Acute diarrhea, Antiemetics, Therapy, Vomiting



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