

A STUDY ON INTRAVENOUS ODANSETRON IN CHILDREN WITH GASTROENTERITIS

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ABSTRACT

To evaluate the efficacy of ondansetron for the treatment of vomiting and thus reducing the need for hospital stay and intravenous rehydration in children with gastroenteritis.

KEYWORDS: Acute Gastroenteritis, Anti Emetics, Hospital Stay, Rehydration

Ondansetron is a selective serotonin 5-HT₃ receptor antagonist is well established in patients with nausea & vomiting associated with chemotherapy, radiotherapy and surgery. The wide distribution of 5-HT₃ receptors have shown the clinical benefits in patients with gastrointestinal motility disorders like diarrhoea. Ondansetron is well tolerated with lower incidence of sedation and only in isolated cases extra-pyramidal reactions molecular formula is C₁₈H₁₉N₃O. Orally, disintegrating can be given with their food. Parentrally 0.5 mg / kg infused over 15 mins. Onset of action starts within 30 mins. Syrup ondansetron 4mg in 5ml. It is licensed over 1 month. More than 40 kg 0.1 mg / kg IV over 2-5 minutes. Ondansetron works in the stomach to block the signals to brain that cause nausea & vomiting. It is contraindicated in hypersensitivity patients to the drugs.

MATERIALS AND METHODS

The present study was conducted in the department of paediatrics ACSMCH from April 2017 to April 2019. It is a retrospective study using antiemetics (ondansetron) in acute gastroenteritis cases. Proforma was used record information on age, sex (Table 1) presenting complaints like vomiting, loose stools, fever (Table 2) duration of illness, clinical findings and administration of drugs.

Inclusion Criteria

- a) Children from 1 yr – 12 yrs
- b) Inpatients children
- c) Complaints of diarrhoea and vomiting
- d) Treatment with antiemetic – ondansetron

Exclusion Criteria

- a) Babies below 1 yr and above 12 yrs
- b) Only with diarrhoea
- c) Children attending out patient block

Definition & Main Study Variables

- a) **Diarrhoea:** Diarrhoea is defined as the passages of atleast three watery stools in 24 hours period. However recent changes in the consistency of stools was more important than frequency.
- b) **Vomiting:** It is an unpleasant sensation followed by nausea associated with increased salivation, enquired about projectile or not, frequency, content, bilious or not, relationship with food.
- c) **Oral zinc:** It reduces stool volume, shortens the duration of diarrhoea, reduces severity, abdominal distension also reduces the incidence and duration of next attack of diarrhoea and thereby reduces hospital admission and stay.
- d) **Probiotics:** It contains lactobacillus. It shortens the duration of diarrhoea with Rota virus, decreases the incidence of IV dehydration and finally reduces the number of stools. No adverse effect noted. Some countries oral dehydration solutions are fortified with probiotics and zinc.

RESULTS AND DISCUSSION

5HT₃ Antagonist indicated in radiation chemotherapy post operative conditions except for adverse effects like constipation & headaches. Drugs Availability by blocking serotonin receptors in GI Tract. Contraindicated in children less than 3 years, hypersensitivity.

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Table 1: Background variables of the study subjects

Variable	Classification of Variable	Number (out of 100)
Age	< 5 years	35
	≥ 5 years	65
Gender	Male	59
	Female	41
Eating outside food	Yes	33
	No	67

Table 2: Clinical profile of the study subjects

Parameter	Number (Percentage)	95% C. I
Diarrhea and Vomiting	73	64.3 – 81.7
Diarrhea and Vomiting along with fever	27	18.3 – 35.7

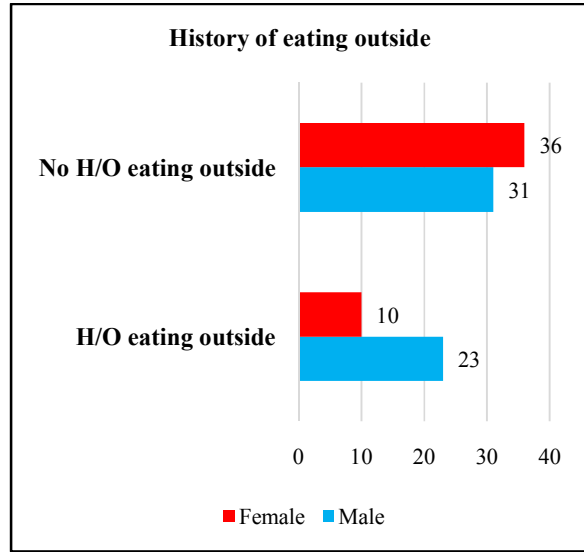


Figure 1: Graphical representation of the history of eating outside food

Table 3: Association between age of the subjects with ADD and had history of eating outside food and certain factors

Variable	Classification of variable (number of people in the group out of 100)	Number of subjects who had ADD and had history of outside food (out of 33)	Odds ratio (95% C. I of odds ratio)	Chi – square value	P – value
Age	< 5 years (35)	15	1.96 (0.83 – 4.64)	2.37	0.12
	≥ 5 years (65)	18	1.00		
Gender	Male (59)	23	1.98 (0.82 – 4.80)	2.33	0.13
	Female (41)	10	1.00		

OBSERVATION

From the study it is observed that diarrhoea and vomiting are common below 5 yrs, with male preponderance (Table 3), often eating food from outside while travelling is seen (Figure 1). Many times diarrhoea and vomiting alone results & few instances it is associated with fever. Most cases were treated with probiotics and zinc.

CONCLUSION

From the study intravenous odansetron is indicated for nausea & vomiting in children. It reduces the duration of hospital stay & quickly improves rehydration except for the fewer side effects like headache, constipation, fatigue & rashes.

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