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Original Research

Assessment of cases of GERD in children- A clinical study

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ABSTRACT:

Background: Gastro esophageal reflux in children is the passage of stomach contents into the esophagus. The present study was conducted to assess the cases of GERD in children. **Materials & Methods:** The present study was conducted on 128 children of age ranged 4-10 years reported with their parents to the department with the complaint of GERD. General information such as name, age, gender etc. was recorded. Symptoms in all children were recorded. **Results:** Out of 128 children boys were 70 and girls were 58. Age group 4-6 years had 35 boys and 24 girls, 6-8 years had 28 boys and 20 girls and 8-10 years had 7 boys and 14 girls. Common symptoms in children were diarrhea seen in 55, constipation in 24, vomiting in 128, fever in 66, hematemesis in 54 and lethargy in 102. The difference was significant ($P < 0.05$). **Conclusion:** Authors found that common symptoms in children with GERD were diarrhea, constipation, vomiting, fever, hematemesis and lethargy.

Key words: Constipation, Gastro esophageal reflux disease, Vomiting

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INTRODUCTION

Gastro esophageal reflux in children is the passage of stomach contents into the esophagus. It is a normal physiologic process, occurring throughout the day in infants and less often in children and adolescents, typically after meals.¹ It may be asymptomatic or cause mild, nontroubling symptoms such as regurgitation or occasional vomiting. Regurgitation (spitting up) is the passive movement of stomach contents into the pharynx or mouth. Vomiting is the forceful movement of stomach contents through the mouth by autonomic and voluntary muscle contractions, sometimes triggered by reflux.² Even though the pathophysiology and symptoms, especially in older children, of pediatric GERD are similar to those in adults, children may also present with a wide range of distinct gastro-esophageal and extra-esophageal symptoms and potential complications. The

conservative approach of “educate-test-treat” seems to be especially important in infants, where regurgitation most commonly reflects physiological immaturity of the gastro-esophageal junction, including a short distance and lack of the acute angle between the esophagus and the gastric fundus (angle of His), where the food is initially stored after ingestion.³ A higher prevalence of GERD is present in children who have the following: a history of esophageal atresia with repair; neurologic impairment and delay; hiatal hernia; bronchopulmonary dysplasia; asthma; and chronic cough etc.⁴ The present study was conducted to assess the cases of GERD in children.

MATERIALS & METHODS

The present study was conducted in the department of Pedodontics. It comprised of 128 children of age ranged 4-10 years reported with their parents to the department with the complaint of GERD. The study protocol was approved from institutional ethical committee. All parents were informed and written consent was obtained. General information such as name, age, gender etc. was recorded. Symptoms in all children were recorded. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of children

Total- 128		
Gender	Boys	Girls
Number	70	58

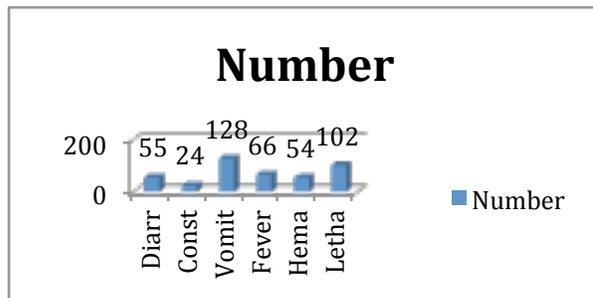
Table I shows that out of 128 children boys were 70 and girls were 58.

Table II Age wise distribution

Age group (Years)	Boys	Girls
4-6	35	24
6-8	28	20
8-10	7	14
Total	70	58

Table II shows that age group 4-6 years had 35 boys and 24 girls, 6-8 years had 28 boys and 20 girls and 8-10 years had 7 boys and 14 girls.

Graph I Symptoms in children



Graph I shows that common symptoms in children were diarrhea seen in 55, constipation in 24, vomiting in 128, fever in 66, hematemesis in 54 and lethargy in 102. The difference was significant (P<0.05).

DISCUSSION

The passage of gastric content into the esophagus (i.e., GER) is a normal phenomenon occurring many times a day, in both adults and children. Infants are especially prone to regurgitate and it has been shown that the number of infants with this phenomenon decreases from about 80% during the first month of life to less than 10% at the age of one year. A study by Faubion et al.⁵ on 921 infants showed that over 47% of one-month-old infants have one or more regurgitation or vomiting episodes per day, however this number falls to just 6.4% by the age of seven months. Several factors contribute to exacerbate this phenomenon in the youngest infants, including the sole or predominantly liquid milk-based diet, the recumbent position and the immaturity of the function and structure of the gastro-esophageal junction.⁶ The present study was conducted to assess the cases of GERD in children. In present study, out of 128 children boys were 70 and girls were 58. Age group 4-6 years had 35 boys and 24 girls, 6-8 years had 28 boys and 20 girls and 8-10 years had 7 boys and 14 girls. Differential diagnosis includes upper gastrointestinal tract disorders; cow's milk allergy; and metabolic, infectious, renal, and central nervous system diseases. Pharmacologic management of GERD includes a prokinetic agent such as metoclopramide or cisapride and a histamine-receptor type 2 antagonist such as cimetidine or ranitidine when esophagitis is suspected.⁷ We found that common symptoms in children were diarrhea seen in 55, constipation in 24, vomiting in 128, fever in 66, hematemesis in 54 and lethargy in 102. Infantile gastroesophageal reflux may present with frequent regurgitation or vomiting, postprandial irritability, prolonged feeding or feeding refusal, or back arching. Progressively worsening projectile vomiting in the first months of life is concerning for pyloric stenosis and requires immediate imaging and surgical referral.⁸ Recurrent nonprojectile vomiting or regurgitation beyond 18 months of age is uncommon and suggests GERD or more concerning pathology. Poor weight gain, parent-reported abdominal pain, and coughing or choking during feeding may also suggest GERD and warrant further workup. Bilious vomiting at any age, particularly in the first few months of life, is an emergency and suggests intestinal obstruction. Gastrointestinal bleeding also requires further workup.⁹ In

children, the prevalence of food allergy is estimated to be approximately 6–8%, with some studies reporting prevalence even of up to 18%. Both, regurgitation and vomiting are well-recognized clinical manifestations of food allergy, mainly of cow's milk protein allergy (CMPA), which represents the most common food allergy in early childhood. Although it is difficult to discriminate between GERD and allergy driven GER symptoms based only on clinical picture, this is particularly important with regards to the future treatment.¹⁰

CONCLUSION

Authors found that common symptoms in children with GERD were diarrhea, constipation, vomiting, fever, hematemesis and lethargy.

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