

Profile of Patients With Gastroesophageal Reflux Disease



Medical Science

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ABSTRACT

Background: GERD has traditionally been considered less common in Asian countries in comparison to western world. Recent studies indicate that its prevalence in India ranges between 8-20% which is comparable to that in the west.

Objective: To study the cases of GERD presenting at Niloufer Hospital

Methods: 106 children under the age of 122 months admitted to Niloufer hospital with history of symptoms and signs suggestive of GERD were studied, the period of study jan 2011 to jan 2014. Selection of cases was based on the clinical signs and symptoms based on the criteria as per the criteria given by American Academy of Pediatrics. Milk scan was done.

Results: The male predominance is clearly seen. 69.8% of males vs. only 30.2% of females. It is observed that cases are coming from all over the Andhra Pradesh. But predominantly they are from Hyderabad (26.42%) and Ranga Reddy District (19.81%). It is found that the 59.4% had signs and symptoms suggestive of GERD but they are normal on milk scan. Among the positive cases, grade II constituted the most cases i.e. 13.21%, followed by grade IV i.e. 10.4%.

Conclusion: GER is common in infants but GERD is not so common in early childhood. Most infants have physiological reflux and need minimal intervention as their symptoms resolve by 18 months of age.

INTRODUCTION:

Gastroesophageal reflux or GER means involuntary passage of gastric contents into the esophagus and is often physiological but gastroesophageal reflux disease or GERD means symptoms or complications associated with pathological GER [1].

In western countries, GERD is the most common gastrointestinal disease. It is associated with a huge economic burden and decreased quality of life. In addition, GERD can be associated with worrisome complications such as strictures, Barrett's esophagus (BE) and rarely, esophageal adenocarcinoma (EAC). Studies describing the epidemiology of GERD in India and for that matter in south-east Asia, are sparse and traditionally, GERD is thought to be uncommon in the developing countries [2].

Recent studies indicate that its prevalence in India ranges between 8-20% which is comparable to that in the west. Reports on the risk factors and prevalence for GERD have been inconsistent between studies [3].

Hence present study has been undertaken to study the profile of patients with GERD.

METHODS AND METHODOLOGY:

106 children under the age of 122 months admitted to Niloufer hospital with history of symptoms and signs suggestive of GERD were studied, the period of study jan 2011 to jan 2014. Selection of cases was based on the clinical signs and symptoms based on the criteria as per the criteria given below.

These children were subjected to Milk Scan test at MNJ cancer hospital in the Nuclear Medicine Department. The HOD of nuclear medicine department with his team has conducted the milk scan test as per the standard procedure.

Methodology-

selection of cases was as per the criteria given below

PRESENTING SYMPTOMS OF GASTROESOPHAGEALREFLUX DISEASE (GERD) IN INFANTS AND CHILDREN [4]

Infants	Children
Vomiting	Regurgitation

Poor weight gain	Anemia and hematemesis
Irritability	Dysphagia
Feeding refusal or dysphagia	Asthma or chronic cough
Recurrent pneumonia	Recurrent pneumonia

After thorough clinical examination and making a tentative diagnosis of GERD children were investigated for the evidence of gastro esophageal reflux by Nuclear scintigraphy using Radionuclide isotope technetium 99 as tracer for evidence of GER and its grades of reflux to confirm GERD.

Milk scan test:

Technetium 99 a radioactive substance of 5 mi is mixed in milk of 30 ml and given as a feed. In infants ryles tube was placed if needed. After the feed by placing the child in supine position in front of GAMMA CAMERA 120 frames to detect the distribution of the radioactive material in the gastro intestinal tract were acquired at 30 seconds per frame, for 60 mts (one hour). If needed pediclorol drops were used as a sedative to make child comfortable during the test period. A delayed frame after 24 hours is captured to look for evidence of Tc99 in lungs a sign of Gerd with aspiration into lungs.

RESULTS & DISCUSSION:

106 children under the age of 122 months admitted to Niloufer hospital with history of symptoms and signs suggestive of GERD were studied, the period of study jan 2011 to jan 2014.

The male predominance is clearly seen. 69.8% of males vs. only 30.2% of females. This may be due the attitude of society towards the girl child. Maximum subjects were in the age group of 3 to 9 months among both males and females. It is observed that cases are coming from all over the Andhra Pradesh. But predominantly they are from Hyderabad (26.42%) and Ranga Reddy District (19.81%). This is because of the easy accessibility. Only 4 cases have shown the radioisotope activity in the lungs. It is found that the 59.4% had signs and symptoms suggestive of GERD but they are normal on milk scan. Among the positive cases, grade II constituted the most cases i.e. 13.21%, followed by grade IV i.e. 10.4%.

Table 1: SEX WISE DISTRIBUTION OF POSITIVITY

SEX	POSITIVE	NEGATIVE	TOTAL
MALE	31 (48.4%)	43 (51.6%)	64 (100%)
FEMALE	12 (28.6%)	20 (71.4%)	42 (100%)
TOTAL	43 (40.6%)	63 (59.4%)	106 (100%)

Table 1 shows the sex wise distribution of positivity of GERD on milk scan. The positivity rate is found more among males (48.4%) compared to females (28.6%).

Table 2: SEX WISE DISTRIBUTION OF GRADING OF POSITIVITY

GRADES	MALE	FEMALE	TOTAL
GRADE I	07 (22.6%)	02 (16.6%)	09 (20.9%)
GRADE II	10 (32.3%)	04 (33.4%)	14 (32.5%)
GRADE III	06 (19.4%)	03 (25%)	09 (20.9%)
GRADE IV	08 (25.7%)	03 (25%)	11 (25.7%)
TOTAL	31 (100%)	12 (100%)	43 (100%)

Table 2 shows sex wise distribution of grading of positivity. Among males, grade II cases were highest (32.3%) followed by grade IV (25.8%). Among females also, grade II cases were highest (33.4%) followed by grade III and grade IV i.e. 25% each.

Table 3: AGE WISE DISTRIBUTION OF POSITIVITY

AGE (months)	POSITIVE	NEGATIVE	TOTAL
< 3	10 (23.3%)	09 (14.3%)	19 (17.9%)
3 – 9	27 (62.8%)	36 (57.1%)	63 (59.4%)
10 – 12	02 (4.66%)	05 (7.9%)	07 (6.6%)
13 – 24	02 (4.66%)	05 (7.9%)	07 (6.6%)
> 25	02 (4.66%)	08 (12.7%)	10 (9.4%)
TOTAL	43 (40.6%)	63 (59.4%)	106 (100%)

Table 3 shows age wise distribution of positivity. Maximum number of positive cases were seen in the age group of 3 – 9 months followed by the age group of less than 3 months (23.3%).

Table 4: AGE WISE DISTRIBUTION OF GRADING

AGE (months)	GRADE I	GRADE II	GRADE III	GRADE IV	TOTAL
< 3	0	02 (20%)	02 (20%)	06 (60%)	10 (100%)
3 – 9	06 (22.2%)	10 (37.03%)	07 (25.9%)	04 (14.8%)	27 (100%)
10 – 12	01 (50%)	0	01 (50%)	0	02 (100%)
13 – 24	0	02 (100%)	0	0	02 (100%)
> 25	02 (100%)	0	0	0	02 (100%)
TOTAL	09 (20.9%)	14 (32.5%)	10 (23.3%)	10 (23.3%)	43 (100%)

Table 4 shows the age wise distribution of grading. It is seen that in the age group of less than 3 months, maximum cases were grade IV. In the age group of 3 – 9 months, maximum cases were of grade II. In the age group of 10 – 12 months, only 1 case was found belonging to grade I and grade III. In the age group of 13 – 24 months, only 2 cases were there which are in grade II. In the age group of more than 25 months, again only 2 cases were there, which belonged to grade I.

MANAGEMENT OF CASES

As we noted that grade IV reflux is very high i.e. 41 cases out of 43 were under 2 years of age. They were managed by thickening of the fed, postural management, small and frequent feeds with good result. Only 10 cases were advised lansoprazole granules 1 mg/kg body weight dissolved in feed for about 4 weeks. All patients improved. On telephonic follow up of these cases, one case died i.e. 0.94% of the studied cases.

CONCLUSION:

GER is common in infants but GERD is not so common in early childhood. Most infants have physiological reflux and need minimal intervention as their symptoms resolve by 18 months of age. There is no gold standard diagnostic test for GERD and investigations should be tailored to the clinical concern for a given child. For extraesophageal manifestations, pH-metry with or without impedance and for esophagitis, endoscopy is the best investigations. Surgical therapy is not a panacea as it carries significant morbidity and often fails in those who need it most.

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