

Study of Recurrent abdominal pain below 18 Years Children's of Telangana

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Abstract

Background: Recurrent abdominal pain occurs in children with any organic cause and usually occurs four times in a month, which impairs the activities of the child in their absence from school with considerable anxiety. **Method:** 95 school-going children aged below 18 years with RAP were studied as per Appley's criteria. Blood examinations included LFT, CBC, Urine analysis, culture, and stool examination for cysts. Ova, parasite, x-ray, USG, and CT scan of the GIT were carried out to rule out the cause of RAP. **Results:** Clinical manifestations were 27 (28.4%) pallor, 20 (21.5%) constipation, 23 (24.2%) mesenteric lymphadenopathy, 18 (18.9%) Urinary tract infections, 5 (5.26%) hepatomegaly, and 2 (2.10) splenomegaly. **Conclusion:** It is confirmed from the present pragmatic study that RAP in children has GIT disease, but the majority of children with RAP have psycho-somatic disorders; hence, psychiatric counselling of children and parents, modifications of lifestyle, and dietary habits will have more effect in treating such patients apart from appropriate medication.

Keywords: Non-organic, dietary habits, Appley's Criteria, Recurrent abdominal pain

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children with irritable bowel syndrome (IRS), including functional and organic pain.^{3,4} It is reported that the prevalence of RAP in children is 10–20% globally, and 3–4% of children have a causative organic pathology. Boys are more commonly affected than girls. The prevalence of RAP in girls is usually suggestive of levels of sex hormones. Ovarian hormones can modulate visceral pain perception and susceptibility to stress. There is also an association between obesity and RAP. Hence, an attempt was made to evaluate the various factors of RAP in school going children below the age of 18 years.

INTRODUCTION

Recurrent abdominal pain (RAP) in children describes recurrent abdominal pain without an organic cause. RAP in children is defined as abdominal pain that occurs at least four times a month over a period of two months or more, is severe enough to limit a child's activities, and, after appropriate evaluation, cannot be attributed to another medical condition. It causes a great deal of school absence and considerable anxiety.¹ RAP is believed to be a functional gut-brain interaction disorder (FGID) caused by altered feed back mechanisms between the gut and central pain pathways.² There are several defined RAP patterns in

MATERIAL AND METHOD

95 children below 18 years old with recurrent abdominal pain who visited Maheshwara Medical College Hospital in Isnapur, Patancheru (mandal), Sangareddy (district), and Telangana-502307 were studied.

Inclusive Criteria: Children having recurrent abdominal pain (RAP) aged below 18 fulfilling Appley's criteria for RAP were selected for study.

Red flags on history Localized pain away from umbilicus Pain awakening the child at night Pain associated with changes in bowel habits, dysuria, rash arthritis Occult bleeding Repeated vomiting especially bilious Constitutional symptoms like recurrent fever, loss of appetite, lethargy	Red flags on physical examination Loss of weight or growth retardation Organomegaly Localized abdominal tenderness particularly away from the umbilicus Joint swelling, tenderness or warmth Pallor rash hernias of the abdominal wall
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Exclusion Criteria: Children with congenital anomalies like volvulus, megacolon, or retroviral diseases were excluded from the study.

Methods: Blood examination, CBC, LFT, Urine analysis, stool examination for cysts, parasites, x-ray, USG abdomen, and lower GIT investigations were carried out if necessary. Moreover, classification of RAP by symptomatology according to Rome-II criteria, viz., functional dyspepsia, IBS (Irritable Bowel Syndrome), functional abdominal pain, and abdominal migraine Aerophagia was also taken into consideration. The duration of the study was from January 2021 to November 2021.

Statistical analysis: anthropometric parameters of BMI and dietary habits of various diseases were classified and grouped by percentage. The ratio of male and female children was 2:1.

Observation and Results

Table 1: Anthropological parameters in RAP children

- Height – 147 to 150 cm in 55 (57.8%) children, 151 to 157 cm in 40 (42.1%) children
- Weight – 40 to 44 kg in 65 (68.40%) children, 45 to 48 kg in 30 (31.5%) children
- BMI – 18.2 to 19.2 in 59 (62.1%) children, 19.3-20.2 in 36 (37.8%) children

Table 1: Anthropological parameters in RAP Children(No of patients 95)

Sl No	Parameters	No of patients	Percentage
1	Height		
	a - 147 to 150	55	57.8
	b - 151 to 157	40	42.1
2	Weight (KG)		
	a - 40 to 44	65	68.4
	b - 45 to 48	30	31.5
3	BMI		
	(Body mass Index)		
	a- 18.2 to 19.2	59	62.1
	b- 19.3 to 20.2	36	37.8

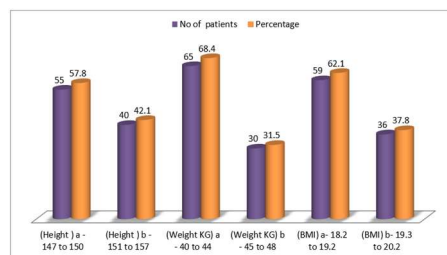


Table 1: Anthropological parameters in RAP Children

Table 2: Study of dietary habits in RAP children 23 (24.2%) were vegetarian, 20 (21.5%) were non-vegetarian, and 52 (54.2%) had mixed food habits.

Table 2: Study of dietary habits in RAP children(No of patients 95)

Sl No	Dietary habit	No of patients	Percentage
1	Vegetarian	23	24.2
2	Non-vegetarian	20	21.05
3	Mixed food habits	52	54.7

Table 2: Study of dietary habits in RAP children

Table 3: Clinical manifestations 27 (28.4%) had pallor, 20 (21.5%) had constipation, 23 (24.2%) had mesenteric lymphadenopathy, 18 (18.9%) had urinary tract infection, 5 (5.26%) had hepatomegaly, and 2 (2.10%) had splenomegaly.

Table 3: Clinical Manifestations in RAP children(No of patients 95)

Sl No	Clinical manifestations	No of patients (95)	Percentage (%)
1	Pallor	27	28.4
2	Constipation	23	21.05
3	Mesenteric lymphadenopathy	23	24.2
4	Urinary tract Infection (UTI)	18	18.9
5	Hepatomegaly	5	5.26
6	Splenomegaly	2	2.10

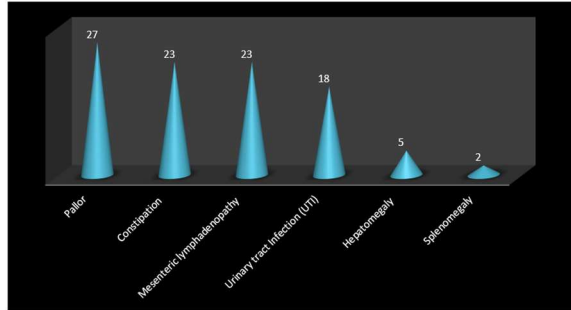


Table 3: Clinical Manifestations in RAP children

DISCUSSION

Present study of RAP in children of Telangana. The anthropological parameters were Height: 147–150–55 (57.8%) and 151–157–40 (42.1%). The weight (kg) was 40 to 44 in 65 (68.4%) patients, 45–48 kg, 30 (31.5%) patients. The BMP – 18.2 to 19.2 in 59 (62.1%) patients, 19.3 to 20.2 in 36 (27.8%) patients (Table 1). The dietary habits included 23 (24.2%) vegetarians, 20 (21.5%) non-vegetarians, and 52 (54.7%) mixed food habits (Table 2). The clinical manifestations were: 27 (28.4%) had pallor, 20 (21.5%) had constipation, 23 (24.2%) had mesenteric lymphadenopathy, 18 (18.9%) had urinary tract infection, 5 (5.26%) had hepatomegaly, 2 (2.10%) had splenomegaly (Table 3). These findings are more or less in agreement with previous studies.^{5,6,7} Pallor is also associated with tiredness, anorexia, dizziness, headache, vomiting, fever, diarrhoea, and constipation.⁸ Intact RAP does not lend itself to a single model of causation. Organic pathology cannot be identified in the majority of children with RAP.⁹ Organic disorders observed in RAP were UTI inflammation (Cron's disease) or distension of the abdomen, as well as intestinal parasites.¹⁰ It is also noted that repeated eating habits, consumption of junk foods, and the burden of school studies may be the causative factors of RAP. Abdomen is also called the magic box because it consists of many systems like the vascular, urogenital, exocrine, and endocrine systems. Hence, it's a challenge for clinicians to diagnose RAP without haematological and radiological support. RAP does not occur in pre-school children or children under 5 years of age. Hence, RAP might be aggravated by psychological difficulties experienced by children during school.⁸ It was also confirmed that RAP was least observed during summer holidays, and many children got symptoms on their return to school after vacation.¹¹ It was also reported that, such patients will develop irritable bowel syndrome (IBS) in the future, About 25 to 29% of RAP patients were recorded during school days.

Hence apart from medical treatment, sympathy, affection, and love by the teachers, non-teaching staff towards

school-going children will have a better prognosis in treating RAP.

SUMMARY AND CONCLUSION

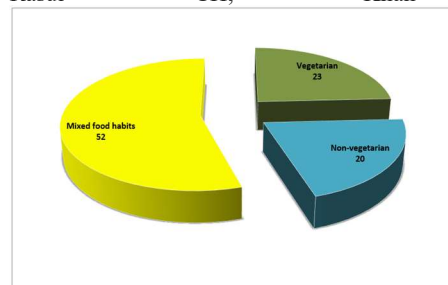
The present study of RAP in children below 18 years old had GIT diseases, but in the majority of cases of RAP, prokinetic or anti-spasmodic medications have proven to be disappointing. Hence, both children and parents should be counselled on stress coping strategies and assured that RAP is not a serious organic disease. Modification of lifestyle and dietary habits is quite helpful in treating RAP in children.

Limitation of study: Due to the tertiary location of the research centre, the small number of patients, and the lack of the latest techniques, we have limited findings and results.

This research paper is approved by the ethical committee of Maheshwara Medical College, Isnapur, Patancheru (Mandal), Sangareddy (dist), Telangana (state), 502307.

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