

# Study of recurrent abdominal pain in children of south Karnataka

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## Abstract

**Background:** RAP is the most common painful health problems in school aged children with various organic causes. It impairs their daily activity and studies as well. **Method:** 530 school going children (Ratio of male and female was 1:2) were studied as per the Apley's criteria Blood examination LFT, CBC, RBE, Urine stool analysis moreover x-ray USG and CT scan of GIT was carried whenever necessary. In addition to Apley criteria, Rome-II criteria was also considered to diagnose and evaluate the cause of RAP **Results:** Clinical manifestation were 159(30%) had 115(21.6%) had constipation 127(23.9%) had mesenteric lymphadenopathy, 90(16.9%) had UTI 30(5.66%) had hepatomegaly, 9(1.69%) had splenomegaly. Moreover their BMI and dietary habits were also rule out **Conclusion:** Majority of the children with RAP had functional GIT diseases, Detail history of patients, hematological, urine, stool, radiological examinations were mandatory to rule out the exact cause. If not cured treated as psycho somatic or emotional/ stress RAP  
**Key Words:** - Emotional, GIT, Apley's criteria, Rome-II, BMI, pallor

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severe enough to affect their activities over longer than three months<sup>2</sup>. Even though the term chronic was also termed when referring to RAP each episode of pain is distinct and separated by periods of well being female children were affected than male children<sup>3</sup>. Abdominal pain is sometimes a sign of life threatening disease. It can also have harmless cause but it can impair the Childs self perception of health and interfere in everyday activities<sup>4</sup>. This affects their study and career. Hence various organic causes have been evaluated by using various techniques like USG, CT scan and blood examination etc.

## INTRODUCTION

Abdominal pain is perhaps the most common painful health problem in school going children. J Apley a British pediatrician, studied abdominal pain among the children extensively and observed that, approximately 10 to 15% of school aged children get recurrent episodes of abdominal pain<sup>1</sup>. He named this symptoms complex as Recurrent abdominal pain,(RAP) syndrome, he also explained that, at least three episodes of abdominal pain,

## MATERIAL AND METHODS

530 school going children of both sexes visiting pediatric OPD Adichanchangiri institute of medical sciences B G Nagar, Nelamangala (Tq) Mandya (dist) Karnataka were studied

**Inclusion criteria:** Children having Recurrent Abdominal pain (RAP) aged between 6-15 years. Children fulfilling Apleys criteria of RAP were including in the study.

Red flags on history	Red flags on physical examination
Localized pain away umbilicus	Loss of weight or growing retardation
Pain awakening the child at night	Organomegaly
Pain associated with changes in bowel habits, dysuria, rash arthritis	Localized abdominal tenderness particularly away the umbilicus
Occult bleeding	Joint swelling tenderness or heat
Repeated vomiting especially bilious	Pallor rash hernias of the abdominal wall
Constitutional symptoms like recurrent fever, loss of appetitive lethargy	

**Exclusion criteria:** Children's having congenital anomalies like volvulus, Mega colon, retroviral diseases children were excluded from the study

**Methods:** Blood examination CBC, LFT, Urine analysis culture stool examination for cyst ova, parasite, x-ray USG abdomen and lower GIT were carried if necessary. Moreover classification of RAP by symptomatology according Rome-II criteria viz functional dyspepsia, IRBS, (Irritable bowel syndrome) functional abdominal pain, abdominal migraine Aerophasia was also taken into consideration. The duration of study was about three years (from April 1995 to May 1998)

**Statistical analysis:** Anthropological parameters of BMI, Dietary habits various diseases were classified and grouped with percentage. The ratio of male and female children were 1:2

## OBSERVATION AND RESULTS

**Table-1** – Anthropological parameters in RAP children- In the study of height 310(58.4%) were between 147 to 150cm 220 (41.5%) children were between 151 to 157cm In the study of weight 340 (64.1%) children were 40kg to 44kg, 190 (35-81) children were between 45 to 48kg. The BMI study was- 335(63.2%) children were between 18.2 to 19.2 BMI 195 (36.7%) children were between 19.3 to 20.2 BMI

**Table-2-** Study of Dietary habits in RAP children was – 180(33.9%) were vegetarian, 152 (28.6%) were Non-vegetarian, 198 (37.3%) children were both vegetarian and Non-vegetarian,

**Table-3-** The clinical manifestations of the RAP were - 159(30%) had pallor 115 (21.6%) had constipation 127(23.9%) had mesenteric lymphadenopathy, 90 (16.9%) had UTI, 30 (5.66%) had hepatomegaly 9(1.69) had splenomegaly.

## DISCUSSION

The study of RAP in children of south Karnataka- 530 children were studied their anthropological parameters were height-310 (58.4%) had 147 to 150 cm, 220 (41.5%)

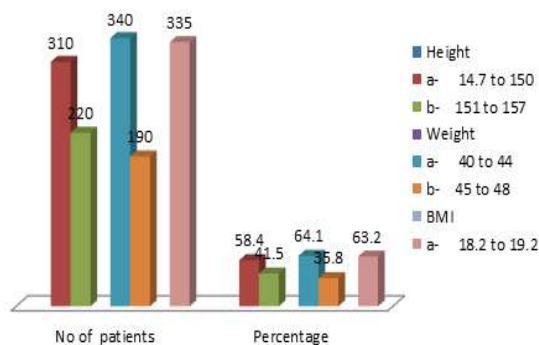
children had 151 to 157cm weight of children was- 340(64.1%) had 40 to 44kg, 190 (35.8%) children had 45 to 48kg wt. the BMI study was 335 (63.2%) had 18.2 to 19.2 BMI, 195 (36.7%) had 19.3 to 20.2 BMI (Table-1). In the study of dietary habits in RAP children- 180 (33.9%) were vegetarian 152 (28.6%) were Non-vegetarian, 198 (37.3%) children were both vegetarian and Non-vegetarian (Table-2) The clinical manifestations of the RAP were -159(30%) had pallor 115 (21.6%) had constipation 127(23.9%) had mesenteric lymphadenopathy, 90 (16.9%) had UTI, 30 (5.66%) had hepatomegaly 9(1.69) had splenomegaly.(Table-3) These findings were more or less in agreement with previous studies<sup>5,6,7</sup>. As the abdomen is called as, magic box. Because it consists of many systems like vascular, Uro genital, exocrine and endocrine system. Hence it is challenge to clinical to diagnose RAP without Hematological and radiological support. As RAP does not occur in pre-school children or children below 5 years. Hence RAP might be aggravated by psychological difficulties experienced by children, during school<sup>8</sup>. It was also confirmed that RAP was least observed during summer holidays and many children got symptoms on return to school after vacation<sup>9,10</sup>. It was also reported that, such patients will develop Irritable Bowel syndrome (IRBS) in future, About 25 to 29 histories of RAP patients during school days<sup>11</sup>. Hence apart from medical treatment sympathy, affection, love by the teachers, non-teaching staff towards school going children will have better prognosis in treating RAP

## SUMMARY AND CONCLUSION

The present study of RAP in school going children will be help to pediatrician to treat efficiently the various cause of RAP. As RAP is aggravated during school days psychiatric counseling advice is must because RAP is psycho-somatic rather than organic diseases This research paper was approved by Ethical Committee of AIMS B G Nagar -571432 Mandya (dist) Karnataka

**Table 1:** (No of patients 530) Anthropological parameters in RAP children

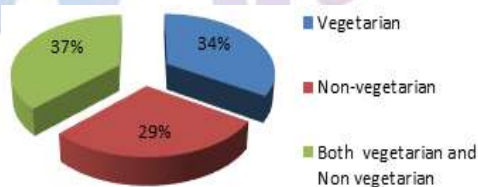
SI No	Parameters	No of patients	Percentage
1	Height		
	a- 147 to 150	310	58.4
	b- 151 to 157	220	41.5
2	Weight		
	a- 40 to 44	340	64.1
	b- 45 to 48	190	35.8
3	BMI		
	a- 18.2 to 19.2	335	63.2
	b- 19.3 to 20.2	195	36.7



**Figure 1:** Anthropological parameters in RAP children

**Table-2:** (No of patients 530) Study of Dietary habits in RAP children

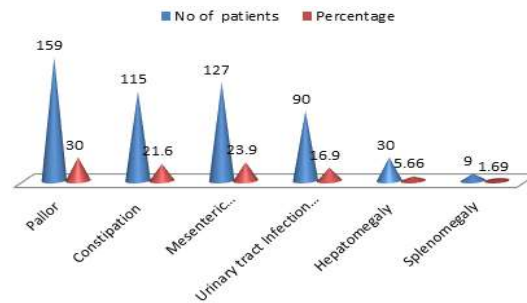
SI No	Dietary habit	No of patients	Percentage
1	Vegetarian	180	33.9
2	Non-vegetarian	152	28.6
3	Both vegetarian and Non vegetarian	198	37.3



**Figure 2:** Study of Dietary habits in RAP children

**Table 3:** (No of patients 530) Clinical Manifestations of RAP in children

SI No	Clinical manifestations	No of patients	Percentage
1	Pallor	159	30
2	Constipation	115	21.6
3	Mesenteric lymphadenopathy	127	23.9
4	Urinary tract Infection (UTI)	90	16.9
5	Hepatomegaly	30	5.66
6	Splenomegaly	09	1.69



**Figure 3:** Clinical Manifestations of RAP in children

## REFERENCES

1. Alley's Naish N- Recurrent Abdominal pain A field survey of 1000 school children Arch D,S child 1958,33,165-170
2. Baffler ph, Gross M- Recurrent abdominal pain in childhood Dtsch Arztebl Int.2011,108(17) 205-304
3. Rasul CH, Khan MAD- Recurrent abdominal pain in school children in Bangladesh J. Ceylon coll phys 2000,33,110-114
4. Devnarayana N M, De silva DGH- Recurrent abdominal pain in cohort of Sri Lankan children and adolescents J. Trop paed 2008,54, 178-183
5. Boey cc, Goh KI- Predictors of recurrent abdominal pain among 9 to 15 year old urbon school children in Malaysian. Acta pediatri 2001,90,353-355
6. Dutta S Mehta M- Recurrent abdominal pain in Indian children and its relation with school and family environment Indian paed. 1999. 36, 917-920
7. Hung RC, Palmer L J- Prevalence and Pattern of childhood abdominal pain in an Australian general practice J. paed child health 2000,36,349-353
8. Stordal K Nygarad E A organic abnormalities in recurrent abdominal pain in children Acta padiatri 2001, 90,1-5
9. O' Donnell B- Out come based on personal experience too small series abdominal pain in children Worcester blacks well scientific publication 1985,106-13
10. Williams N, Jackson D- Incidence of Non specific abdominal pain in children during school term population survey based on discharge diagnose BMJ. 1999,318-455
11. Christensen MF- Mortensen O- Long term prognosis in children with recurrent abdominal pain Arch Dis. child 1975, 50, 110-114

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