

ORIGINAL ARTICLE

Assessment of aetiological factors for recurrent abdominal pain in children- Original research

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ABSTRACT:

Background: Recurrent abdominal pain is a frequent presenting complaint in general practice, general paediatric clinics and paediatric gastroenterology clinics. The present study was conducted to assess aetiological factors for recurrent abdominal pain in children. **Materials & Methods:** 104 children with recurrent abdominal pain of both genders were enrolled. Weight (kg), height (m), body mass index (BMI; kg/m²) and previous medical history within 1 year was recorded. Aetiological factors were recorded. **Results:** Out of 104 patients, boys were 54 and girls were 50. Aetiological factors were functional dyspepsia in 62, irritable bowel syndrome in 28 and functional constipation in 14 cases. The difference was significant ($P < 0.05$). Duration of pain was <1 hour in 32, 1-2 hours in 46 and 2-3 hours in 34. Site of pain was upper abdomen in 54, lower abdomen in 41, periumbilical in 7 and other in 2. Severity was mild in 34, moderate in 28 and severe in 42 cases. Duration of disease was 2 months in 50, 4 months in 41 and 6 months in 23 cases. The difference was significant ($P < 0.05$). **Conclusion:** Recurrent abdominal pain (RAP) in children is quite common. Most common aetiology found to be functional dyspepsia, irritable bowel syndrome and functional constipation.

Key words: Recurrent abdominal pain, Diarrhea, Children

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INTRODUCTION

Recurrent abdominal pain is a frequent presenting complaint in general practice, general paediatric clinics and paediatric gastroenterology clinics.¹ Since its first description in 1958, the condition has remained poorly understood with a multitude of factors being implicated in causation. The symptoms tend to be vague and investigations seldom show organic disease. Treatment strategies vary and have little basis in evidence.²

The symptom of abdominal pain in childhood is so common that few children go through school years without experiencing it at some stage. As many as half of all children with recurrent abdominal pain do not see a doctor about it, although their pain is often as severe as in those who do; presumably the patient or family regard the symptoms as trivial, because of mild severity or transient nature. Usually, it is only when the pain impacts on the functioning of the child or family that medical help is sought.³

Recurrent abdominal pain (RAP) in children is defined as at least three episodes of AP that affect physical activity over 3 months. The most common etiology is functional gastrointestinal disorder (FGID). The potential risk factors for RAP are of three main types: biological, psychosocial, and

environmental factors.⁴ Nevertheless, only a few studies have focused on children with AP; they reported some symptoms as independent risk factors for RAP, such as pain lasting for ≥ 7 days, pain causing night awakening, and epigastric pain. However, some crucial risk factors have not been assessed, especially psychological factors that may greatly affect the clinical course of RAP.⁵ The present study was conducted to assess aetiological factors for recurrent abdominal pain in children.

MATERIALS & METHODS

The present study comprised of 104 children with recurrent abdominal pain of both genders. All parents gave their written consent for the participation of their children in the study.

Data such as name, age, gender etc. was recorded. Weight (kg), height (m), body mass index (BMI; kg/m²) and previous medical history within 1 year was recorded. Complete haemogram, urine for routine analysis as well as culture and stool examination were done. Other investigations like chest X-ray, ultrasonography was also performed. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 104		
Gender	Boys	Girls
Number	54	50

Table I shows that out of 104 patients, boys were 54 and girls were 50.

Table II Assessment of aetiological factors

Aetiological factors	Number	P value
Functional dyspepsia	62	0.02
Irritable bowel syndrome	28	
Functional constipation	14	

Table II, graph I shows that aetiological factors were functional dyspepsia in 62, irritable bowel syndrome in 28 and functional constipation in 14 cases. The difference was significant ($P < 0.05$).

Graph I Assessment of aetiological factors

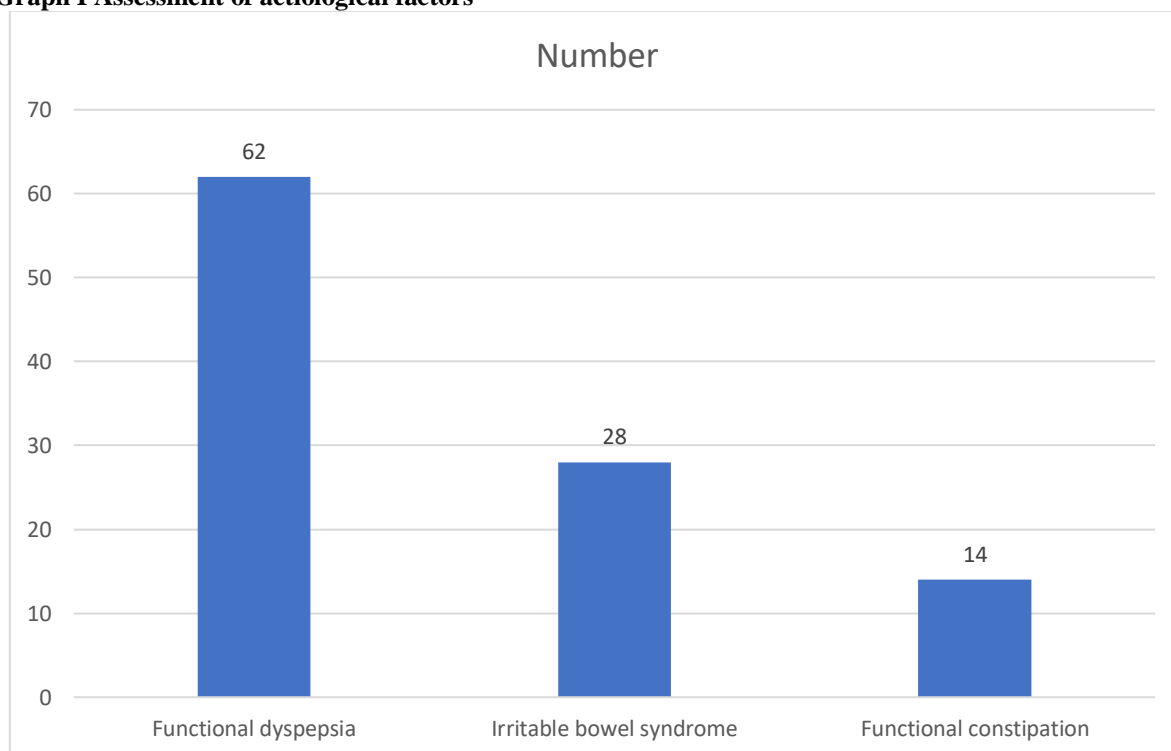
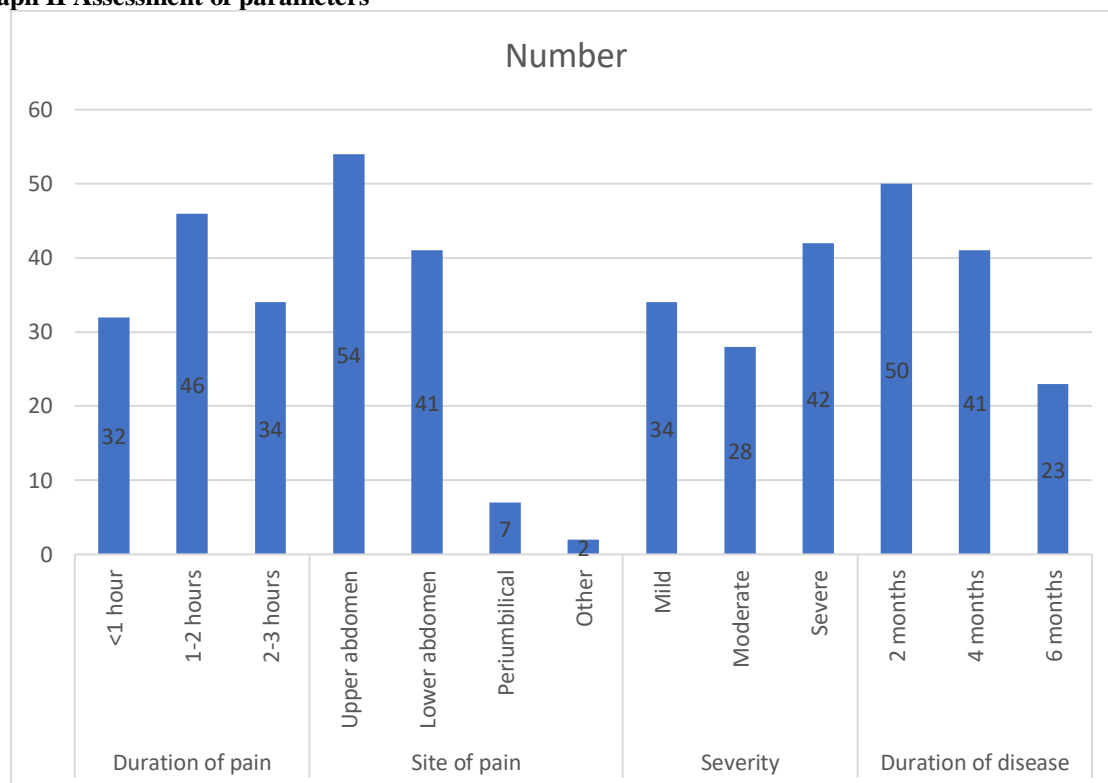


Table III Assessment of parameters

Parameters	Variables	Number	P value
Duration of pain	<1 hour	32	0.42
	1-2 hours	46	
	2-3 hours	34	
Site of pain	Upper abdomen	54	0.12
	Lower abdomen	41	
	Periumbilical	7	
	Other	2	
Severity	Mild	34	0.93
	Moderate	28	
	Severe	42	
Duration of disease	2 months	50	0.05
	4 months	41	
	6 months	23	

Table III, graph II shows that duration of pain was <1 hour in 32, 1-2 hours in 46 and 2-3 hours in 34. Site of pain was upper abdomen in 54, lower abdomen in 41, periumbilical in 7 and other in 2. Severity was mild in 34, moderate in 28 and severe in 42 cases. Duration of disease was 2 months in 50, 4 months in 41 and 6 months in 23 cases. The difference was significant ($P < 0.05$).

Graph II Assessment of parameters



DISCUSSION

RAP is seen among 10-12% of school aged children with female preponderance. In spite of being one of the most common complaints, this is one of most difficult symptoms to evaluate at bedside owing to its varying magnitude of etiology.^{6,7} Eliciting a proper localisation from the child and the pretension of abdominal pain when the child is in an uncomfortable or stressful situation or as a result of nausea, or urge to defecate; hinder the pediatrician in reaching a specific diagnosis.⁸ Pain is categorised as either organic or non-organic, depending on whether a specific etiology of the pain is detected. In studies using Apley’s definition of RAP the prevalence ranged from 11% to 45%.^{9,10} The present study was conducted to assess aetiological factors for recurrent abdominal pain in children.

We found that out of 104 patients, boys were 54 and girls were 50. Kumar et al¹¹ studied the etiological factors related to RAP. Occurrence of abdominal pain every day in ORAP was 10 and 32 NORAP children, and once per week in organic ORAP was 3 and 14 NORAP children. Duration of a pain episodes most of the day in ORAP was 11 and 21 NORAP children. Severe pain can see in 9 ORAP and 24 NORAP, and mild pain in 2 ORAP and 19 NORAP. Whereas, site of pain especially in periumbilical region in ORAP was 5 and 28 NORAP children, and lower abdomen pain in organic ORAP was 4 and 23 NORAP children. Moreover, 2 months duration of disease in ORAP was 17 and 3 NORAP children. In addition, presence of bloating in ORAP was 6 and 22 NORAP children, and absence of bloating in ORAP was 11 and 51 NORAP

children. Presence of early satiety in in ORAP was 8 and 19 NORAP children, and absence of satiety in ORAP was 9 and 54 NORAP children.

We observed that aetiological factors were functional dyspepsia in 62, irritable bowel syndrome in 28 and functional constipation in 14 cases. Piriyaakitphaiboon V et al¹² identified the risk factors for recurrent abdominal pain (RAP) in children who presented with nonorganic acute abdominal pain. Of the 367 patients with nonorganic acute abdominal pain, 94 (25.6%) experienced RAP within three months. In this group with RAP, 76 patients (80.8%) were diagnosed with functional gastrointestinal disorders, including functional dyspepsia, irritable bowel syndrome, functional abdominal pain-not otherwise specified, and functional constipation. History of gastrointestinal infection (p=0.011), mental health problems (p=0.022), abdominal pain lasting ≥7 days.

We found that duration of pain was <1 hour in 32, 1-2 hours in 46 and 2-3 hours in 34. Site of pain was upper abdomen in 54, lower abdomen in 41, periumbilical in 7 and other in 2. Severity was mild in 34, moderate in 28 and severe in 42 cases. Duration of disease was 2 months in 50, 4 months in 41 and 6 months in 23 cases. Yacob et al¹³ reported that children with symptoms of anxiety or major depression are more likely to have pain-predominant FGIDs than are healthy individuals. In a longitudinal study of children with FGID. Horst et al¹⁴ stated that extraintestinal somatic and depressive symptoms were a potential risk for predicting the development of FGID in adults.

The limitation the study is smaller sample size.

CONCLUSION

Authors found that recurrent abdominal pain (RAP) in children is quite common. Most common aetiology found to be functional dyspepsia, irritable bowel syndrome and functional constipation.

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