ORIGINAL ARTICLE

Recurrent Abdominal Pain in Preschool Children

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Abstract

One hundred fifty preschool children with recurrent abdominal pain (RAP) were studied. Organic cause was observed in 135 (90%) and non-organic in 15 (10%). Giardiasis was the commonest organic cause in 81 (60%) either alone or with other parasites followed by ascariasis 27 (20%) alone. Other cause of organic pain were urinary tract infection (UTI) 9 (6.7%), abdominal tuberculosis 9 (6.7%), eosophagitis/gastritis 4 (2.9%) and gall stones 2 (1.4%). School phobia, sibling rivalry, unpleasant relations among parents and nocturnal enuresis were significant factors associated with non-organic causes.

Key Words

Abdominal pain, Giardiasis.

Introduction

Recurrent abdominal pain (RAP) in children is defined as the presence of atleast three episodes of abdominal pain severe enough to effect their activities over a period longer than three months (1). The prevalence of RAP in children ranges between 10-20% (1-4). The incidence of organic and non-organic causes of RAP are variable in different studies (1-5). Emotional components like stressful events, sibling rivalry, school phobia, unpleasant parent relations etc. have been attributed as underlying component in non-organic RAP (1, 3-8). Causes of organic pain like H. Pylori infection, parasitic infestations and cholelithiasis have also been reported. The aim of study was to determine the organic and non-organic causes of RAP. Most of the studies were chiefly conducted on older children (5-12 years) (3-5), we included younger children (2-6 years) in this study.

Material and Methods

About 150 children between the age of 2 to 6 years attending private pediatric clinic for recurrent pain of abdomen from March 2002 to March 2003 were enrolled for the study. A detailed history and examination, complete hemogram, urinanalysis and stool examination (five consecutive days) were done in all cases. Special investigations like skiagram chest and abdomen, ultrasonography of abdomen, serological tests for tuberculosis and upper gastrointestinal endoscopy were performed whenever indicated. The children who were having organic cause were treated as per the cause and followed for atleast 3 months. RAP was labelled when:-

(a) an organic cause was demonstrated;

(b) there was clinical and laboratory response to treatment; and

(c) there was remission from abdominal pain for atleast three months after treatment. The children in whom cause was non-organic RAP (NORAP) a detailed family history was taken and counselling done.

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Results

Out of 150 children complaining of RAP, there was significant male predominance 102 (68%). Ninty three (62%) were in the age 4 to 6 years while rest belonged to 2 to 4 years group as shown in Table 1. The organic cause was found in 135 (90%) children and non-organic in 15 (10%). The parasite infestation was commonest cause which included giardiasis 81 (60%) either alone or with other parasites like entamebia histolytica, enterobias vermicularis etc. Ascariasis 27 (20%) was also a common cause. In addition to RAP, there were other features in form of failure to thrive, anorexia and diarrhoea off and on and pica. Recurrent urinary tract infection was the cause of RAP in 9 (6.7%) children which were diagnosed by urinlysis and culture. Abdominal tuberculosis was detected in 9 (6.7%) children.. There was family history of pulmonary tuberculosis in all cases. ELISA tests and examination of ascitic fluid confirmed the diagnosis. Gall-stones were detected in 2 (1.4%) children on ultrasonography. Both the children were 6 years old. None of these children had clinical features of chronic hemolytic anemia, liver disease or hyperlipidemia.

Table 1: Causes of recurrent abdominal pain (RAP) in preschool children.

Age	2-4 years (n=42)		4-6 years (n=93)		
	M	F	M	F	Total
Organic causes:-					
Giardiasis+other parasites	20	9	37	15	81
Ascariasis	3	2	14	8	27
UTI	2	1	3	3	9
Abd. tuberculosis	3	--	4	2	9
Eosophagitis/gastritis	1	--	2	1	4
Gall stones	--	--	--	2	2
Others	--	1	2	--	3
	29	13	62	31	135
			(n=15)		
Non-organic causes:-	--	--	11	4	15

Non-organic recurrent pain abdomen was seen in 15 (10%) children. School phobia, sibling rivalry, unpleasant parent relations among parents and nocturnal enuresis were associated factors The children were treated symptomatically and followed upto 3 months.

Discussion

Recurrent abdominal pain (RAP) is common in children especially in pre-school children and adolescents. Our study was limited to 2 to 6 years. Different studies estimate the prevalence at 10-15%. As suggested by Apley, the dominant view has been recurrent abdominal pain is an expression of physiological maladjustments in response to family or school problems in predisposed children (1). In addition, the parents of children with RAP have been reposted to have pain themselves to model pain behaviour for their children (2). Contrary to this belief, many studies have found organic causes of RAP to be more common.

Many studies have revealed organic causes as gastrointestinal disease and urinary tract disease, though in varying incidences (2-5, 9-10). In our study parasite infestation was the commonest cause, while urinary tract infection (6.7%) abdominal tuberculosis (6.7%), eosphagitis/gastritis (2.9%) and gall stones (1.5%) were other causes. Mavromichalis *et al* found organic causes viz. eosphagitis, antritis or duodenitis in 93% of the children in their study group (10). Kumar *et al* found antral gastritis in 85% of their patients with upper abdominal pain and of these significant number of patients responded to H. pylori eradication therapy proving gastritis to be cause of RAP (11). Bansal *et al* in their study on children with RAP found 47% children to have organic cause such as giardiasis, UTI, worm infestation or amebiasis. Of these children who underwent endoscopy, antral gastritis was found in 52% children (12). Only 9.7% children had psychogenic cause of RAP in their study (12). In agreement with these findings, our study also revealed organic cause of RAP in 90% children.

Parasitic infection especially giardiasis was the most important cause in our study and was adequately treated. Many of these children were having anorexia, diarrhoea off and on and were also having history of pica. Giardiasis is one of the most common pathogenic intestinal protozoal infection world wide. However, it is not generally regarded as a cause of severe illness. In a retrospective study, it was found that out of 125 patients, 41% presented with the complaints of abdominal pain (9). In our study, also giardiasis was the most common cause of organic abdominal pain accounting alone for 60%.

Worm infestation has never been taken seriously as cause of abdominal pain due to high prevalence even in asymptomatic patients (2).

Gall stones have been reported to be a cause of RAP in young children (13, 14). Two of our cases had gall stones as cause of RAP. Jaundice, localized abdominal pain or intolerance to fatty food were not seen in our cases.

We also found children with NORAP were living in different psychosocial environment at school and home as seen in previous studies (1-5, 7,8). Most of the cases were above 4 years of age. Family history, sibling rivalry, school phobia and punishment were associated with NORAP. It has also been seen that generalized aches, nocturnal enuresis and sleep disturbances were common in NORAP (7,8). Psychological problems can also be seen in patients with organic RAP (3,4). Thorough investigations are must before labelling recurrent abdominal pain (RAP) to be of organic or psychogenic origin. Contrary to usual belief, organic causes such as giardiasis remain the commonest cause of RAP in preschool children. Both organic and non-organic factors need to be managed simultaneously for proper management of RAP.

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