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ETIOLOGICAL AND CLINICAL PROFILE OF PAIN ABDOMEN IN PEDIATRICS OPD

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ABSTRACT

Background: Abdominal pain is a frequent condition in children. Majority of episodes of pain abdomen are self-limiting, but persistent abdominal pain requires haematological and radiological evaluation. Acute abdomen is caused by a variety of conditions like acute appendicitis, intussusception etc which requires urgent intervention. Pain abdomen can be due to a variety of conditions which requires a thorough history and physical examination followed by other investigations to confirm the diagnosis. In some patient diagnosis can be challenging. **Methods:** 150 patients within the age range from 1 to 16 years attending Pediatric Opd at civil hospital Palampur, Himachal Pradesh, India from July 2022 to December 2022 presenting with pain abdomen of various etiologies were included in the study. After history taking all the patients were thoroughly examined physically and underwent some haematological, radiological and urine examination. **Results:** Out of 150 patients 38 (25.3%) had chronic constipation, 30(20%) had UTI, 14(9.3%) were surgical emergencies, 10(6.6%) had parasitic infestation, 18 (12%) patients had acute gastritis, 12(8%) had acute gastroenteritis 24(16%) were functional causes, 1 patient had abdominal tuberculosis and 3 were miscellaneous. Out of 150 patients, 38 patients had pain in epigastric region , 61 patients had pain around umbilical region , 31 patients had pain in lumbar region and 20 patients had pain in iliac region .There was association of pain abdomen with junk food ingestion in 28 patients out of 150 patients .Associated symptoms such as vomiting was present in 30 patients, fever was present in 52 patients, loose motions were present in 12, constipation was present in 38 patients and burning micturition was present in 18 patients . Out of 150 patients, 126 had some organic pathology and 24 were functional pain abdomen. Out of 24 functional pain abdomen case, there was history of some stress related issues at home, school or with parents, family and friends in 20 patients.

INTRODUCTION

Abdominal pain is a manifestation of multiple pathologies which may vary from benign to life threatening conditions.[1] The pain may be acute or chronic in nature. Careful history and examination and appropriate investigations are necessary to arrive at a diagnosis. There is considerable variation among children in their perception and tolerance for abdominal pain. This is one reason the evaluation of chronic abdominal pain is difficult. A child with functional abdominal pain (no identifiable organic cause) may be as uncomfortable as one with an organic cause. It is very important to distinguish between organic and nonorganic (functional) abdominal pain because the approach for the management is based on this.[2] Normal growth and physical examination (including a rectal examination) and the absence of anemia or hematochezia are reassuring in a child who is suspected of having functional pain.

Chronic abdominal pain is one of the most commonly encountered symptoms in childhood and adolescence and accounts for 2 to 4 % of Pediatric office visits.[3] It is characterized by chronic, recurrent or continuous abdominal pain which is not well localized. Children often have symptoms of depression and/or anxiety and distress leading to significant school absence.[4]

Recurrent abdominal pain in children was defined as at least 3 episodes of pain over at least 3 months that interferes with function Some definitions.[5]

Chronic abdominal pain – long lasting intermittent or constant abdominal pain that is functional or organic (disease based).

Functional abdominal pain – Abdominal pain without demonstrable evidence of pathologic condition, such as anatomic metabolic, infections, inflammatory or neoplastic disorder. Functional abdominal pain can manifest with symptoms typical of functional dyspepsia, irritable bowel syndrome abdominal migraine or functional abdominal pain syndrome.

Functional dyspepsia -Functional abdominal pain or discomfort in the upper abdomen.

Irritable bowel syndrome – Functional abdominal pain associated with alteration in bowel movements.

Abdominal migraine - Functional abdominal pain with features of migraine (paroxysmal abdominal pain associated with anorexia, nausea, vomiting or pallor as well as maternal history of migraine headaches).

Etiology of pain abdomen[6]

Nonorganic causes include functional abdominal pain, irritable bowel syndrome, nonulcer dyspepsia.

Gastrointestinal causes include chronic constipation, lactose intolerance, parasite infestation (especially Giardia), Excess fructose or sorbitol ingestion, crohn's disease, peptic ulcer, esophagitis, Meckel diverticulum recurrent intussusception ,inguinal hernia ,chronic appendicitis.

Gall bladder and pancreas include cholelithiasis, choledochal cyst, recurrent pancreatitis.

Genitourinary causes include urinary tract infection, hydronephrosis, urolithiasis.

Miscellaneous causes include abdominal migraine, angioneurotic edema, acute intermittent porphyria etc.

While evaluating a patient with chronic abdominal pain, distinguishing organic pain and functional pain can be challenging. Negative lifestyle events and high life stress levels also do not help to distinguish organic and nonorganic pain, despite several reports of higher levels of stress in children with chronic pain abdomen.

MATERIAL AND METHODS

Sample size - This is a hospital based study conducted on 150 children attending Pediatric Opd with pain abdomen from July 2022 to December 2022.

Inclusion criteria – Patients of the age group of 2 to 16 years attending attending Pediatric Opd at civil hospital Palampur were included in the study. History and clinical examination, complete blood count, urine routine examination, culture sensitivity, stool examinations were done in all cases. In some patient x ray abdomen, ultrasonography, Cect abdomen, fecal calprotectin were done. All these patients were evaluated for a period of 6 months.

Exclusion criteria – children less than 2 year and above 16 years were excluded.

Children with cerebral palsy and global developmental delay were excluded from the study.

Statistical analysis – All the data obtained were presented in percentages using Microsoft excel.

RESULTS

Table 1: Distribution of gender.

Gender	N =150
Female	87(58%)
Male	63(42%)

Table 2: Etiological profile.

Etiology	**No. of cases**
Chronic constipation	38(25.3%)
UTI	30(20%)
Surgical causes	14(9.3%)
Parasite infestation	10(6.6%)
Gastritis	18(12%)
Acute gastroenteritis	12(8%)
Functional causes	24(16%)
Abdominal tuberculosis	1(0.6%)
Miscellaneous	3(2%)

Table 3: Clinical profile.

Site	Epigastric	38
	Umbillical	61
	Lumbar	31
	Iliac	20
Associated symptoms	Vomiting	30
	Fever	52
	Loose motion	12
	Constipation	38
	Burning micturition	18
Association with junk food intake	Present	28
	Absent	122

RESULTS

A total of 150 patients were included in the study. Out of this 63(42%) were males and 87(58%) were females with slight female predominance. Gender based distribution have been summarised in Table -1. All these patients were followed up for a period of 6 months. Out of 150 patients 38 (25.3%) had chronic constipation, 30(20%) had UTI, 14(9.3%) were surgical emergencies, 10(6.6%) had parasitic infestation, 18 (12%) patients had acute gastritis, 12(8%) had acute gastroenteritis, 24(16%) were functional causes, 1 patient had abdominal tuberculosis and 3 were miscellaneous. The Etiological profile have

been summarised in Table -2. Out of 150 pateint, 38 patients had pain in epigastric region , 61 patients had pain around umbilical region, 31 patients had pain in lumbar region and 20 patients had pain in iliac region .There was association of pain abdomen with junk food ingestion in 28 patients out of 150 patients. Associated symptoms such as vomiting was present in 30 patients, fever was present in 52 patients, loose motions were present in 12, constipation was present in 38 patients and burning micturition was present in 18 patients The clinical profile have been summarised in table -3.

On investigation Haemogram showed elevated total leucocyte count in acute appenditicis and UTI, ESR was elevated in patient with abdominal tuberculosis. UTI was found in 30 cases, urine routine microscopy showed more than 5 pus cells in 18 cases, 8 had epithelial cells and 4 had RBCS in urine examinations. Urine culture was positive in 5 cases out of which 3 showed growth of e-coli, one showed klebseila and one showed pseudomonas.

Stool microscopy showed giardiasis in 6 cases and ascariasis in 4 cases.

USG abdomen showed acute appendicitis in 5 cases , intussusception in 2 cases, ureteric calculi in 1 case and nonspecific mesenteric lymphadenitis in 10 cases and enlarged mesenteric lymphadenopathy in 1 case which was later followed by contrast enhanced CT abdomen which showed necrotic lymphnodes.

Out of 150 patients, 126 had some organic pathology and 24 were functional pain abdomen. Out of 24 functional pain abdomen case, there was history of some stress related issues at home, school or with parents family and friends in 20 patients.

DISCUSSION

Pain abdomen is a very common problem seen in Pediatric Opd. It affects daily routine of children and parents and even results in school absentism. In recurrent and chronic pain abdomen, proper investigations should be done to establish a diagnosis. In our study, pain abdomen (recurrent and chronic) was more common in females as compare to males whereas Gadiyar et al[7] found almost equal incidence of pain abdomen in males and females. Apley et al[8] found pain abdomen is more common in females as compare to males and Shruti et al.[9] found its more common in boys as compared to girls . Present study showed parasitic infestation in 6.6 % patients where as Gadiyar et al[7] found 24 % of children having parasitc infestation.

Present study revealed organic cause of pain abdomen in 84 % patients whereas functional pain abdomen was present in 16 % of patients. Shruti et al[9] found organic cause in 47 % of patients, 16 % were suffering from psychogenic problems related to family friend, studies and school and no cause found in 37 % patients. In our study, most common site of pain abdomen was periumbilical followed by epigastric region which corroborates with many other studies. Rasul CH et al.[10] also found that periumbilical region is the most common site of pain abdomen followed by epigastric region. Shruti et al found epigastric region most common site of pain abdomen followed by periumbilical region. Cognitive behavioural therapy has been tried in functional pain abdomen patients which showed results in few patients. There was association of pain abdomen with junk food in 28 patients out of 150 patients.

Limitations of study

1. Small sample size
2. Patients were not followed up for a longer period of time.

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