

ORIGINAL STUDY

**CLINICAL MODELS OF CHRONIC ABDOMINAL PAIN BY
ORGANIC CAUSE IN CHILDREN**

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ABSTRACT

Experimental data accumulated over time and clinical observations concerning the location and characteristics of pain, have led to clinical models of chronic abdominal pain by organic cause. Are described pain as esophageal pain, stomach or gastrointestinal pain, intestinal pain, hepatobiliary pain, pancreatic pain, kidney pain and pelvic pain.

KEYWORDS: *pain, organic, chronic*

1. Introduction

Abdominal pain, depending on its duration, can be divided into two categories: acute and chronic. Chronic abdominal pain is intermittent or constant pain, long-term (covered in one of the following ranges: less than one month, 1 - 6 months more than 6 months). Depending on the etiology, chronic abdominal pain is described by organic or functional cause. Organic pain is caused by anatomical, infectious, inflammatory, metabolic or neoplastic factors [1,2] .

2. Material and methods

The study group, consisted of 117 patients, aged between 0 and 18 years, hospitalized for chronic

abdominal pain by organic cause in Paediatric II and Surgery clinics of Children's Emergency Hospital "St. John "Galati, between 01.01.2009-01.01.2011. Patients have pain by esophageal, stomach or gastrointestinal, bowel and colon, hepatobiliary and kidney causa. Pain diagnosis was made using history, clinical and paraclinical investigations(laboratory, abdominal ultrasound, gastrointestinal transit, endoscopy, radiological examination, etc.) . Pain assessment was performed using worksheets that include age-appropriate methods (method of dialogue, analog visual scale and scale of symbolic faces) and cognitive level of patients.

Clinical models examined were:

Esophageal pain: is located epigastric, sometimes radiating retrosternal or posterior, in dorsal region average, is like a burning, occurs after eating or night, short duration (minutes or seconds),

moderate intensity, is increased by the bending of the trunk or supine, is accompanied of heartburn, acid and food regurgitation, fails to antacids. Occur with gastroesophageal reflux (with or without peptic esophagitis) and hiatal hernia [3-5]

Stomach or gastroduodenal pain: epigastric or right upper quadrant location, has no particular location, is a painful cramps or hungry, present pre-or post-prandial evolution, usually at night, small and great periodicity, duration of minutes or hours and intensity variable, fails to antacid, food .Is accompanied by loss of appetite, weight loss, dyspepsia, occult or manifest upper gastrointestinal bleeding. Occurs in peptic ulcer disease and chronic gastroduodenitis. [6-10]

Intestinal or colonic pain: jejunum and ileum pain is located around the navel, in median line right or in the hypogastrium, colonic pain is diffuse location, usually in the lower abdomen or even along the colon and sometimes in the right and left colic angle, irradiation can be back to the sacrum or to the external genitals, the intensity is variable, the character is deaf (continuous or paroxysmal) or colicativ, is accompanied by fever, weight loss, blood or pus in stool, diarrhea or constipation, lower digestive hemorrhage, skin or joints changes. Appears in the intestinal parasites, chronic constipation, coeliac disease, Meckel diverticulum, chronic appendicitis, inflammatory bowel diseases, congenital malformations bowel. [3] [4] [8-10]

Hepatobiliary pain: shows location in the epigastriu or in the right upper quadrant, irradiate into the right shoulder or right iliac fossa, is colicativ and high intensity, evolution postprandial (after lunch rich in fat, alcohol) or at night, duration several hours variable, is enhanced by breathe deeply and palpation of the abdomen, fails to antispastic, is accompanied by fever, chills, nausea, vomiting food / bilious, jaundice, positive Murphy. Appears in gallstones, chronic cholecystitis, cystic coledoc, pancreatobiliare

junction malformations, liver failure, chronic hepatitis. [4] [8-10]

The pain of renal origin: location variable in the lumbar region, right/ left upper quadrant, wing, anterior irradiation to the genitals, deaf or colicativ constrictive character, evolution in flare-ups, duration several hours, accompanied by fever, hematuria, miction disorders, changes of diuresis, fails to the administration of the antispastic and anti-inflammatory. Appears in urinary tract infections and kidney abnormalities, kidney stones, congenital or acquired hydronephrosis, nephrotic syndrome, renal tuberculosis, renal tumors (Wilms tumor). [4] [8-10]

3. Results and discussions

1. Esophageal pain - 9 cases (7.7% of the organic cause of chronic abdominal pain)

- **etiology:** gastroesophageal reflux disease - 6 cases (66.7%); hiatus hernia - 3 cases (33.7%)
- **located:** most frequently epigastric - 5 cases (55.6%): gastroesophageal reflux disease - 3 cases (60%); hiatus hernia - 2 cases (40%)
- **irradiate:** most frequently retrosternally - heartburn - 6 cases (85.7%): gastroesophageal reflux disease - 3 cases (50%); hiatus hernia - 3 cases (50%)
- **intensity** : colicativ (2 cases (22.2%): gastroesophageal reflux disease and hiatus hernia) and moderate (7 cases (77.8%): gastroesophageal reflux disease - 5 cases (71.4%); hiatus hernia - 2 cases (28.6%))
- **associated signs:** nausea, vomiting - 9 cases (100% of etiology)
- **evolution under treatment:** fails to the administration of **anti H2** (H2-receptor antagonist) and / or **IPP** (proton pump inhibitor) - 9 cases (100% of etiology): IPP + anti H2 - 4 cases (44.4%); PPI - 5 cases (55.6%)

Esophageal pain is most commonly occurs in gastroesophageal reflux disease (GERD), shows

location epigastric, chest irradiation (heartburn), moderate intensity. It is accompanied by nausea and vomiting, and fails to the administration of PPI + antiH2(Figure1).

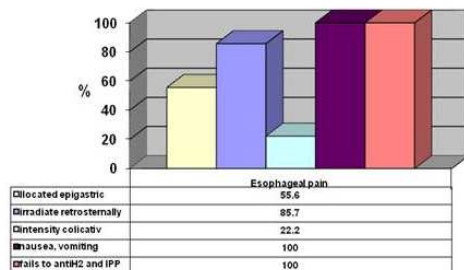


Figure 1. Clinical model of chronic abdominal pain by organic cause of esophageal origin

2. Stomach or gastroduodenal pain- 34 cases (29.1% of the organic cause of chronic abdominal pain)

- **etiology:** chronic gastric ulcer - 3 cases (8.8%); chronic duodenal ulcer - 1 case (2.9%); hypertrophic pyloric stenosis - 2 cases (5.9%); chronic gastroduodenitis - 28 cases (82.4%)
- **location:** most frequently epigastric - 26 cases (76.5%); chronic gastric ulcer - 2 cases (7.7%); chronic duodenal ulcer -1 case(3.8%); hypertrophic pyloric stenosis - 0%; chronic gastroduodenitis - 23 cases (88.5%)
- **intensity:** colicativ - 6 cases (17.6%): chronic gastric ulcer - 1 case (16.7%); chronic gastroduodenitis - 5 cases (83.3%)
- **great periodicity** (spring and autumn months) in 15 cases (44.1%):Spring - 7 cases (20.6%); Summer - 16 cases (47.1%); Autumn - 8 cases (23.5%); Winter - 3 cases (8.8%)
- **evolution under treatment:** fails to the administration of **anti H2** and / or **IPP** in all children (100%): IPP - 13 children (38.2%); Anti H2 - 7 children (20.6%); IPP + anti H2 - 14 children (41.2%)

- **associated signs:** loss of appetite - 1 case (2.9%); anorexia - 14 cases (41.2%); weight loss - 5 cases (14.7%); nausea /vomiting - 24 cases (70.6%); hematemesis - 1 case (2.9%).

Stomach or gastroduodenal pain occurs most frequently in chronic gastroduodenitis, presents epigastric location, moderate or colicativa intensity (gastroduodenitises) and occurs mainly in summer. It is often accompanied by nausea and vomiting and fails to the administration of PPI + antiH2 (Figure. 2).

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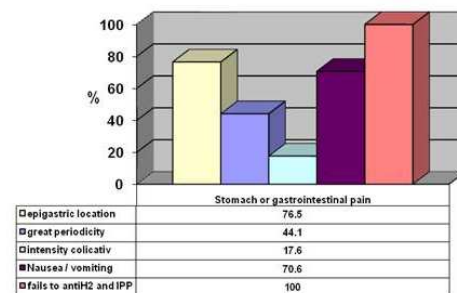


Figure 2. Clinical model of chronic abdominal pain by organic cause of gastroduodenal origin

3. Intestinal and colonic pain - 37 cases (31.6% of the organic cause of chronic abdominal pain)

- **etiology:** Intestinal (intestinal parasites, coeliac disease, Meckel diverticulum, congenital intestinal malformations) - 12 cases (32.4%); Colon (dolicocolon, internal hemorrhoids thrombosed, Hirschsprung disease, rectal polyps) 25 cases (67.6%)
- **located :** **intestinal pain** in the epigastrium - 4 cases (33.3%); **colonic pain** in the lower abdomen - 6 cases (24%)
- **intensity:** moderate in all children with intestinal and colonic pain (100%)
- **associated signs:** fever - 5 cases (13.5%); weight loss - 9 cases (24.3%); rectoragie - 4 cases (10.8%); iarrhea - 8 cases (21.6%); constipation - 15 cases (40.5%); hematochezia - 1 case (2.7%); abdominal distension - 9 cases (24.3%); vomiting - 7 cases (18.9%); anorexia - 20 patients (54.1%).

The pain occurs most frequently with colonic location and shows moderate intensity. It is

accompanied by constipation, anorexia, weight loss and abdominal distension (Figure. 3).

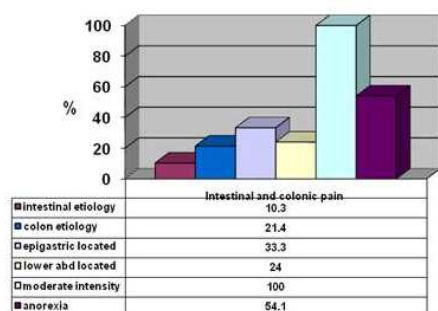


Figure 3. Model Clinical model of chronic abdominal pain by organic cause of intestinal and colonic origin

4. Hepatobiliary pain- 4 cases (2.2% of the organic cause of chronic abdominal pain)

- **etiology:** chronic hepatitis, hepatic hydatid cyst
- **located:** most frequently in the right hypochondrium - 2 cases (50%)
- **intensity:** moderate (100%)
- **evolution under treatment:** fails to Algocalmin in 3 cases (75%)
- **associated signs:** nausea, vomiting food / bilious-2 cases (50%).

Hepatobiliary pain occurs in chronic hepatitis and liver hydatid cyst is located in the right upper quadrant, shows moderate intensity and is accompanied by nausea and vomiting bilious.

5. The pain by renal origin-2 cases (1.7% of the organic cause of chronic abdominal pain)

- **etiology** - kidney tumor and hydronephrosis
- **location:** in the lower abdomen - 2 cases (100%)
- **intensity:** moderate - 2 cases (100%)

- **associated signs:** hematuria, miction disorders (urinary frequency, dysuria), changes in diuresis - 2 cases (100%)

- **evolution under treatment:** fails the antispastic and anti-inflammatory - 2 cases (100%)

Pain of renal origin is caused by hydronephrosis, kidney tumor and is located in the lower abdomen. Pain presents moderate intensity and is accompanied by hematuria, miction disorders and diuresis.

4. Conclusions

Features of chronic abdominal pain by organic cause in patients in the studied group, meet the criteria for admission to clinical models of chronic abdominal pain of organic cause in children. The most common type of pain was the colonic, followed by gastric or gastroduodenal pain.

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