



Dyspepsia In Children

By: Vera Loening-Baucke, M.D., Professor Emeritus of Pediatrics, The University of Iowa, Iowa City, Iowa

A 12-year-old boy presents with a history of abdominal discomfort of 11 month's duration. The discomfort is located in the right, left, and mid-upper abdomen. There is no association of the pain with activity, position, meals or food type, nor any with bowel movements. The abdominal discomfort occurred more commonly in the morning. The pain may last as long as 4 hours. He often experiences nausea when he has the pain and vomits at least once a week. Bowel movements occur once a day and are not related to pain.

The symptom characteristics of dyspepsia in children are persistent or recurrent pain and discomfort in the upper middle region of the abdomen. Individuals often describe the pain as occurring around eating, after eating, or at night. The discomfort can be a sensation of fullness after meals, an early feeling of having had enough to eat (satiety), bloating, belching, nausea, retching, vomiting, regurgitation, anorexia, or food refusal.

Each of these symptoms can be due to either an organic disease or functional gastrointestinal disease. In children, an organic cause is suggested if the following circumstances are present:

- Young age (less than 5 years of age)
- Fever, weight loss, or slowing of growth
- Bile-stained or blood-stained vomitus
- Pain that awakens the child from sleep
- Referred pain to the back, shoulders or arms
- Pain with urinating
- Blood in the urine
- Side ache (flank pain)
- Inflammation or tears in the anal area (perianal disease)
- Blood in the stool
- Abnormal screening laboratory tests
- A family history of inflammatory bowel disease or peptic ulcer disease

The list of causes that must be ruled out before a diagnosis of functional dyspepsia is made is lengthy

and includes upper gastrointestinal inflammation; motility disorders; pancreatic, biliary or urinary disease; and psychiatric disease.

Functional dyspepsia is defined by the Rome III Committee in children/adolescents as at least a 2-month history of:

- Persistent or recurrent pain or discomfort centered in the upper abdomen (above the umbilicus);
- No evidence that dyspepsia is exclusively relieved by defecation or associated with the onset of a change in stool frequency or stool form (i.e., not irritable bowel); and
- No evidence of an inflammatory, anatomic, metabolic or neoplastic process considered likely to be an explanation for the subject's symptoms

The distinction between pain and discomfort is difficult to make for young children and their parents.

There are limited data on the cause and development of dyspepsia in children. There is some evidence that dysmotility may be involved. Some studies showed evidence of irregular gastric myoelectrical rhythm and delayed emptying of the stomach and duodenum, others an altered antroduodenal motility. Whether these irregularities cause dyspeptic symptoms is not clear, but a slowly emptying stomach, or a backward flow of food from the duodenum to the stomach, may be important. Psychological factors may play a role in symptom expression.

Diagnosis

There are no specific diagnostic markers for functional dyspepsia. As with many other conditions, a thorough and detailed history taken by a physician is the most important component of the assessment and often leads to the correct diagnosis. The history needs to include dietary, psychological, and social factors. A history may disclose a relationship between symptoms and

food, activity, or stressors. It is often helpful to have the child and parents maintain a symptom diary detailing the time, location, intensity and character of the pain or discomfort, time and content of the meals, daily activities, and stool pattern.

Considerable diversity of opinion remains among physicians regarding the extent of diagnostic tests to perform in a child who seems to have a symptom constellation pointing towards a functional cause of the dyspepsia. The diagnostic procedure needs to be individualized, according to the information obtained during the history taking and the physical examination. An upper gastrointestinal endoscopy is not mandatory.

Diagnostic Tests

Endoscopy is an examination of the lining of the esophagus, stomach, and upper part of the small intestine using a thin flexible tube (endoscope) with a small video camera on the tip of the scope.

Ultrasonography is a diagnostic method that uses sound waves to create representative images.

Gastroduodenal manometry is a test that measures pressure changes that occur within the stomach and upper intestine.

Urine evaluation and blood evaluation to screen for other disease are usually necessary. Endoscopy allows the discovery of ulcerations or significant inflammation in the upper gastrointestinal tract. If the endoscopy is normal, then it may be helpful to monitor for acid reflux (back flow of stomach contents into the esophagus). Abdominal ultrasonography does not appear to be helpful in children. Upper gastrointestinal x-rays with small bowel follow-through are useful to exclude physical causes such as malrotation [incorrect position of the intestine in the abdomen], terminal ileitis [Crohn's Disease], and other obstructive or inflammatory lesions. Gastroduodenal manometry is a feasible and useful diagnostic tool in the clinical investigation of children when symptoms suggest altered upper gut function and may provide a basis for a treatment approach with drugs acting on motility of the stomach and the small bowel.

Treatment

The management of dyspepsia revolves around a structural or functional cause. If a structural cause is found, the treatment can be specific to the underlying cause. For functional dyspepsia, the aim is to provide symptomatic relief.

Reduction or avoidance of spicy, fatty, or caffeine-containing food or drink may help if associated with symptom onset. Medications such as H2-blockers [reduce amount of acid produced in the stomach], proton pump inhibitors [limit amount of acid produced] and prokinetic agents such as metoclopramide, domperidone, cisapride or erythromycin [increase gastrointestinal motility], have been used with some success. There remains a proportion of children who may have a behavioral or psychological base to their complaint. For them, treatments such as environmental modification, relaxation techniques, psychotherapy, stress reduction, hypnotherapy, or biofeedback have been used with variable success. For them, low dose tricyclic antidepressants such as amitriptyline and imipramine [to help reduce pain] should be considered.

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This article is in no way intended to replace the knowledge or diagnosis of your doctor. We advise seeing a physician whenever a health problem arises requiring an expert's care.

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Milwaukee, WI 53204. Toll-free (U.S.): 888-964-2001 or 414-964-1799. Visit our websites at: www.iffgd.org or www.aboutkidsgi.org.