THE CHILDREN'S MEDICAL CENTER OF DAYTON
Pediatric Clips NURSING

Functional abdominal pain in children

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Pediatric Nursing Clips by Pediatric Advanced Practice Nurses at Dayton Children's provides quick reviews of common pediatric conditions.

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CASE STUDY:

Jessica is a 10-year-old female with abdominal pain occurring over the last several months. Mom states the pain is periumbical and is happening almost daily. The pain seems worse in the mornings and at night and can be worsened postprandially. Mom states she has not noted any specific foods which worsen symptoms. At times the pain can be worsened with stressful situations. Mom states Jessica likes school and is a good student; however, she has been missing school due to the pain.

Jessica is having normal bowel movements; however, at times she will be in the bathroom a long time with the pain. She has not experienced any unexplained fevers, weight loss, fatigue, loss of appetite or vomiting. She has been seen by her PMD and has a negative workup of labs including CBC, CMP, and ESR and UA along with a normal KUB and abdominal US. Mom presents to the pediatric gastroenterology clinic to find out why her daughter's stomach is hurting fearing that more may be going on.

CASE DISCUSSION

Chronic abdominal pain is one of the more common presenting problems in pediatric gastroenterology. The definition of functional abdominal pain (FAP) is episodic or continuous abdominal pain occurring at least once weekly for more than two months without demonstrable cause of a pathological condition such as an anatomic, metabolic, infectious, inflammatory or neoplastic disorder. FAP can occur as early as 4 to 5 years of age and is most common between the ages of 8 to 10 years with another peak occurrence in adolescence. It occurs more frequently in girls than boys with a ratio of 4:3. Most children with FAP are described as superachievers, internalize their problems of anxiety and depression and tolerate failure poorly. They also have parents or family members who have experienced or have been diagnosed with irritable bowel syndrome.

The pathophysiology of FAP is thought to involve abnormalities in the enteric nervous system that involves the entire gastrointestinal tract. This enteric nervous system interacts with the central nervous system in a bidirectional communication. Dysregulation of this brain-gut communication results plays a role in FAP. Children with functional abdominal pain have an abnormal response to stimuli or normal GI motor activity described as visceral hyperalgesia. Types of stimuli include physiologic, inflammatory processes or psychologic stressors.

DIAGNOSIS

Diagnosis of functional abdominal pain in children 4 to 18 years of age can be made correctly with a thorough and accurate history and physical exam. It is important to obtain a full history and review of symptoms including:

- Location, duration, intensity, frequency and character of pain
- Time of day pain occurs, night vs. morning, weekdays vs. weekends
- Any aggravating factors such as postprandial, types of foods, relation to BM
- Consistency and frequency of BM, presence of blood in stool
- Appetite, weight loss, fevers, joint or muscle aches, vomiting or nausea
- What makes the pain feel better? What types of interventions have been tried? (ie, medications, dietary changes, lifestyle changes)
- Has there been recent travel?
- Is there interference with activities such as missing school or social interactions?
- Any stressors, social issues or anxiety symptoms, what is the family dynamic?
- Is there any pertinent medical history or family history such as IBD or celiac?

The presence of alarm symptoms suggests a higher prevalence of organic disease and justifies further diagnostic testing. Alarm symptoms include but are not limited to weight loss, poor growth, GI bleed, significant vomiting, severe diarrhea, persistent RUQ or RLQ abdominal pain, unexplained fever, family history of inflammatory bowel disease or celiac disease. Alarm signs on physical exam include jaundice, localized abdominal tenderness in RUQ or RLQ, RLQ fullness or mass, hepatosplenomegaly, perianal fissures or skin tags, guaiac positive stool, CVA or spinal tenderness.

Diagnostic testing can be performed to reassure the patient, parent or practitioner of the absence of organic disease, particularly if the pain interferes with activities or diminishes quality of life.

Continued

Continued from the front.

Diagnostic evaluation includes labs including CBC, CMP, sed rate or CRP, celiac panel, IBD markers, UA and culture, stool studies to evaluate infectious process, and radiologic studies such as KUB, upper GI/SBS, CT scan of abd/pelvis and US of abdomen or pelvis. At times procedures such as upper and lower endoscopies are necessary.

TREATMENT

Treatment should be addressed with a biopsychosocial approach, not only aiming to alleviate the illness symptoms, but also identify and remedy the psychological and social factors contributing to the illness. It is helpful to address the family and patient's concerns and summarize the patient's symptoms and reassure that although the pain is real there is no underlying serious or chronic disease. Education of the family is an important aspect of the treatment of functional abdominal pain. Explaining to report any new or alarm symptoms that may need further evaluation. It is important to discuss the avoidance of known or possible triggers such as certain foods (excess dairy, juices, caffeine and sodas) and stressful situations (ie, school and social activities).

Reasonable treatment goals should be the aim to return to normal functioning rather than the disappearance of the pain. Discuss with parents to decrease the focus on the pain and provide distraction and relaxation techniques. Returning to school can be encouraged by identifying and addressing any obstacles to school attendance. At times it is recommended to involve a psychologist or psychiatrist to assist. Medications are occasionally used such as acid suppression, antispasmodics, stool softeners, antidiarrheals or psychotropic medications.

Children with chronic abdominal pain pose unique challenges to caregivers and practitioners. Although the symptoms usually indicate a functional disorder, these children experience distress that can interfere with normal activities and the parents may be very worried. The nurse's role is to educate and support the family in this time of need and provide reassurance and guidance.

REFERENCES

American Academy of Pediatrics Subcommittee on Chronic Abdominal Pain and NASPGHAN Committee on Abdominal Pain. Chronic abdominal pain in Children: A clinical report of the American Academy of Pediatrics and the North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition. *Journal of Pediatric Gastroenterology and Nutrition* 40:245-248, 2005.

FEATURED NURSE SPECIALIST

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Gastroenterology at Dayton Children's

The gastroenterology and nutrition department provides evaluation and diagnosis for infants, children and adolescents with disease involving the esophagus, stomach, intestines, pancreas and liver. The nutrition support service complements the treatment of gastrointestinal disease by providing comprehensive nutrition assessments and recommendations. For more information about Dayton Children's gastroenterology department, call 937-641-3090.

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