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Somatization Disorders: Diagnosis, Treatment, and Prognosis

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Objectives After completing this article, readers should be able to:

1. Identify the various manifestations of somatization disorders in children and adolescents.
2. Understand the association of psychosomatic disorders with personality traits and stressors such as physical and sexual abuse, bullying, parental anxiety, and pressure for a child to perform.
3. Recognize secondary gains of somatization disorders.
4. Explain why it is necessary to focus on school attendance and the management of school avoidance.
5. Develop a partnership with patients and their parents to address the symptoms of a somatization disorder.
6. Plan the treatment and management of somatization disorders

Introduction

Children and adolescents suspected of having somatization disorders present a challenge to pediatricians. Clinicians are often concerned about “missing something,” while also worrying about alienating both the patient and the family when explaining the condition. Many clinicians are baffled by the onslaught of symptoms, feel frustrated by the never-ending recurrent complaints, or become annoyed by the time consumed in caring for patients who might be perceived as “not really being sick.”

The research on somatization disorders is neither easily available nor conclusive. Moreover, paradoxically, although somatoform disorders in children have been defined as psychiatric disorders, psychiatrists seldom see these patients. By default, most children and adolescents who have symptoms are seen by primary care physicians. (1)(2)(3)(4)

This review focuses on understanding, assessing, and developing strategies for managing somatization disorders.

Definition

Somatization is “the tendency to experience and communicate somatic distress and symptoms unaccounted by pathological findings.” (5) However, it must be stressed that somatization can coincide with another illness. Somatization is deemed to exist in conjunction with a physical illness whenever the physical complaints resulting in impairment are grossly in excess of what would be expected from the known illness or findings. Thus, the central feature of somatoform disorders is that they present with symptoms suggestive of an underlying medical condition, yet such a condition either is not found or does not fully account for the level of impairment the child is exhibiting. (6)(7)(8)

Classification

The diagnostic criteria for somatoform disorders originally were established for adults. (6)(7) A diagnostic classification of child and adolescent mental conditions in primary care has been developed that takes into account developmentally appropriate considerations. (8) The manual containing the classification develops an approach to somatization disorders in children that pediatricians may consider more user friendly (Table 1).

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Table 1. Current Classification of Somatization Disorders in Children and Adolescents

- Somatic complaint variation (v 65.49)
- Somatic complaint problem (v 40.3)
- Somatization disorder (300.82)
- Somatoform disorder (undifferentiated) (300.82)
- Somatoform disorder, not otherwise specified (300.82)
- Pain disorder (307.8)
- Conversion disorders (300.6)

Data from Wolraich ML, Felice ME, Drotar D. The classification of child and adolescent mental diagnosis in primary care. In: *Diagnostic and Statistical Manual for Primary Care (DSM-PC) Child and Adolescent Versions*. Elk Grove Village, IL: American Academy of Pediatrics; 1996.

Epidemiology

The prevalence of symptoms associated with somatization in the pediatric population is high: recurrent abdominal pain accounts for 5% of pediatric office visits, and headaches have been reported to affect 20% to 55% of all children, with 10% of teenagers reporting frequent headaches, chest pain, nausea, and fatigue. A sex disparity in the prevalence of somatic symptoms during adolescence (11% of girls and 4% of boys) persists into adulthood. The rate of somatization is highest among lower socioeconomic groups. (4)(9)(10)(11)(12)

Pathogenesis

There is a genetic predisposition to somatization, probably related to traits such as alexithymia (difficulty in reading one’s own emotions), trait anxiety (a continual tendency to react with anxiety), and anxiety sensitivity (a fear of anxiety symptoms and misinterpretation of their meaning). Genetic studies have shown somatoform disorders to be concordant in identical twins. These conditions also cluster above what would be expected by chance in families in which there is attention-deficit disorder and alcoholism. (13)(14)(15)

Somatization, nevertheless, is a learned behavior. It begins with experiences of having a somatic complaint more easily noticed or more acceptable in a household than the expression of strong feelings, such as anxiety, fear, jealousy, and anger. In such an environment, a child may repeatedly garner no attention for emotional distress, instead obtaining more attention for the physical symptoms that often accompany the disturbed emotional state, such as abdominal pain (“Are you hurting, dar-

ling?”). As this “psychosomatic pathway” is reinforced, it manifests throughout a spectrum of somatization disorders, ranging from the mild “somatic complaint variation” (transient complaints that do not interfere with normal functioning) to the more severe “somatoform disorder” (associated with significant social and academic problems).

The importance of psychosocial factors in the child’s family is highlighted by the finding that if a family member has a chronic physical illness, more somatic symptoms occur among the children. Somatizing children often live with family members who complain of strikingly similar physical symptoms. Theoretical contributions stemming from systemic family therapy also point toward the importance of the family’s circumstances. For example, it has been proposed that the symptoms displayed by the child are a way of protecting a distressed parent who, galvanized into caring for the suffering child, is then distracted from his or her own personal concerns. (1)(2)(3)(4)

Stress has been implicated as a triggering factor, and such stress often is bound to parental anxiety. The most common form of stress consists of pressure on the child to perform. More serious problems, such as physical or sexual abuse or being bullied, also may lead to somatic complaints that often develop into a somatization disorder. (16)(17)(18)(19)(20)(21)(22)(23)(24)(25)(26)(27)(28)(29)

Clinical Aspects

Children and adolescents readily report pain and somatic complaints in their sick visits. These complaints often result from a disease such as gastroenteritis or urinary tract infection. However, children can voice similar complaints in the absence of physical disease, and these reports must be approached as possible somatization. (30)(31)(32)(33)(34)(35)(36)(37)(38)(39) Somatoform disorders follow a developmental sequence as children experience affective distress in the form of somatic sensations. In early childhood, these symptoms are recurrent abdominal pain and, somewhat later, headaches. As age increases, neurologic symptoms, insomnia, and fatigue tend to emerge.

Somatization disorders form a continuum that ranges from everyday aches and pains to disabling symptoms. These symptoms are spontaneous and not feigned (which distinguishes them from malingering and factitious disorder) and are not explained better by another mental illness (such as depression or an anxiety disorder).

Somatic Complaint Variation

This variation involves discomfort and complaints that do not interfere with everyday functioning. It is a universal experience. In early infancy, the complaints probably manifest as transient gastrointestinal distress. In childhood, classic recurrent abdominal pain, headaches, and “growing pains” make their appearance. Adolescents may experience more headaches, chest pain, and other transient aches and pains, but these characteristically do not impair their ability to function. Females report more somatic complaints after puberty.

Somatic Complaint Problem

This condition consists of one or more physical complaints that cause sufficient distress and impairment (physical, social, or school) to be considered a problem. In infancy, this situation might occur when gastrointestinal symptoms seriously interfere with feeding and sleep. In childhood, such a condition might entail avoiding or refusing to undertake expected activities (eg, increased school absences). As adolescence approaches, in addition to the somatic complaints, more emotional distress, social withdrawal, and academic difficulties begin to appear. More severe complaints may result in refusal to attend school and recurrent pain syndromes.

Undifferentiated Somatoform Disorder

This condition emerges during adolescence, causing significant impairment. Multiple severe symptoms of at least 6 months' duration are required to make the diagnosis. Complaints include, but are not limited to, pain syndromes, gastrointestinal or urogenital complaints, fatigue, loss of appetite, and pseudoneurologic symptoms. To qualify for this diagnosis, the symptoms should not be explained better by another mental disorder, such as a mood or anxiety disorder, and should not be feigned or intentionally produced. A more severe form, the classic somatization disorder, is an adult condition.

Somatoform Disorder, Not Otherwise Specified

This classification encompasses adolescents who have unexplained physical complaints (fewer than 6 months' duration) as well as those who manifest somatoform symptoms that do not meet the criteria for any specific somatoform disorder, such as pseudocyesis, in which the false belief of being pregnant can be accompanied by endocrine changes.

Pain Disorder

There are three types of pain disorder: pain associated exclusively with psychological factors, pain associated

with both a psychological and a general medical condition, and pain associated with a general medical condition. The onset of pain may be related to psychological stressors. Often, a secondary gain is achieved by being excused from stressful situations or academic pressures. These symptoms may be associated with frequent visits to the pediatrician and parental pressure for unnecessary testing and interventions.

Conversion Disorder

In conversion disorders, one or more symptoms or deficits affect a sensory or voluntary motor function (eg, blindness, paresis), suggesting a medical or neurologic condition, yet the findings are not consistent with any known neuroanatomic/pathophysiologic explanation. (40)(41)(42) The symptoms tend to have a “symbolic meaning,” dealing with an unsolved and unconscious conflict (often relating to themes of repressed aggression or sexuality). The symptoms appear to be a symbolic attempt to resolve the conflict (primary gain), although they also often result in increased attention for the patient (secondary gain).

This form of somatization disorder frequently, but not always, is accompanied by “la belle indifférence,” an attitude of disinterest by the patient despite the serious symptoms experienced. Although the symptoms usually are self-limited, often resolving within 3 months, they may persist and ultimately be associated with chronic sequelae, such as contractures. Frequently, there is a model for the symptoms, such as a grandparent who has cardiac symptoms, but sometimes the patient may be serving as his or her own model, as when pseudoseizures occur in patients who have epilepsy.

Additional Somatoform Disorders

Hypochondriasis (preoccupation with the idea of having a serious disease) and body dysmorphic disorder (overpreoccupation with an imagined or exaggerated defect in physical appearance) are uncommon and seen primarily during late adolescence and young adulthood.

Differential Diagnosis (Table 2)

Organic illnesses must be considered in the differential diagnosis. Over time, up to one third of patients in whom conversion disorder is diagnosed eventually receive a neurologic diagnosis. Endometriosis is often a very late diagnosis following years of “functional pelvic pain,” and persistent epigastralgia may represent a *Helicobacter pylori* infection. Psychiatric disorders, such as depression and anxiety disorder, often present initially with physical complaints such as poor concentration; fatigue; weight

Table 2. Differential Diagnosis of Pediatric Somatization

- Unrecognized physical disease (eg, multiple sclerosis, endometriosis)
- Unrecognized psychiatric disorder (eg, depression, anxiety)
- Factitious disorder/Munchausen by proxy syndrome
- Psychological factors affecting a medical condition

loss; and an increase in headaches, stomachaches, and chest pains. It is important to look for specific psychiatric disorders. Epidemiologic studies show that 14% to 20% of American children have one or more moderate-to-severe psychiatric disorders, with the overall prevalence rising, and the treatment is somewhat different from that of somatization. Factitious disorders, which sometimes are included in the somatization spectrum, can be excluded from this category because the signs and symptoms presented have been staged deliberately and have not really been experienced by the patient as somatization symptoms.

Evaluation

Initially, it is usually unclear whether a particular complaint eventually will declare itself to be caused by an underlying disease. Establishing the diagnosis of a somatoform illness is accomplished over time along three simultaneous tracks: 1) ruling out an organic disease as the cause of the symptoms, 2) identifying psychosocial dysfunction, and 3) recognizing and alleviating stressors. A concomitant biopsychosocial assessment is therapeutic and often followed by improvement and sometimes even resolution of symptoms.

However, the differential diagnosis and evaluation are not based solely on a process of exclusion. It involves identification of a set of positive psychosocial findings. During the initial evaluation, it is important to discuss explicitly the stressors detected and a possible psychosomatic cause as one among many considerations. This will make for an easier future “disclosure.”

Findings that are highly suggestive of a somatization disorder include a history of multiple somatic complaints, multiple physician visits, and many specialty consultations as well as the presence of a family member who has chronic and recurrent symptoms and dysfunction in the primary areas of life (family, peers, and school). Additional questions might include, “Does the parent have any concern about the child’s behavior or emotional

well-being?” and “Is there a family history of psychiatric disorder?” A detailed school history that reviews the numbers of days missed is essential.

In the process of evaluating somatic complaints, the clinician should avoid the temptation to perform unnecessary, repetitive, or extensive testing in an attempt to demonstrate to the family that the presenting complaint is of psychosomatic origin. A cost-effective method of determining the appropriate extent of laboratory and radiographic evaluation is to base the diagnostic plan on the presence of “red flags.” Such complaints and findings suggest an organic cause, such as syncope on exercise, asymmetric location of pain, anemia, or weight loss. When the history and physical examination findings are suggestive of somatization, a basic laboratory screening consisting of a complete blood count, an erythrocyte sedimentation rate or a C-reactive protein, a urine dipstick evaluation, and sometimes a blood chemistry and occult blood stool test is sufficient. More extensive assessments should be reserved for the “red flags.”

Management and Treatment

Eventually, the clinician must “bite the bullet.” The best method of persuasion is to precede any disclosure with a clear demonstration that one has taken the complaint very seriously, which is accomplished best when preceded by careful history taking and a detailed physical examination. The aim is to convey a sense of specialness to the child and family. This communication may serve as a buffer to the emotional injury stemming from having to recognize that “something is wrong” in the child’s life. Correct identification of somatization disorders may not be sufficient to provide help to patients and families, who often are reluctant to accept the explanation. (43) Therefore, successful communication about the condition and the needed treatment is a crucial but sometimes elusive goal (Table 3).

In preparation for disclosure of concerns about a possible somatization disorder, it is very important to ask the child and family about their fear or “fantasy of disease.” This query may elicit surprising answers, such as fear that the child may have cancer or heart disease. Conversely, the reply may convey an already harbored suspicion or understanding of the problem such as “It may be stress or nerves.” Patients are more willing to listen to the pediatrician only if he or she first listens to them. A clear, supportive, matter-of-fact explanation also should assure families that the pediatrician is available to help with the onslaught of feelings that many families experience at the time of diagnosis. During disclosure, the clinician should remind the family of the earlier

Table 3. Principles of Pediatric Somatization Treatment

- Form an alliance with the patient and family
- Be direct; avoid deception in explanations and treatments
- Offer reassurance when appropriate
- Use cognitive and behavioral interventions
- Use a rehabilitative approach
- Use positive and negative reinforcement
- Teach self-monitoring techniques (eg, hypnosis, relaxation, biofeedback)
- Consider family and group therapies
- Improve communication between clinicians and school
- Consolidate care when possible
- Aggressively treat comorbid psychiatric conditions
- Consider psychopharmacologic interventions
- Monitor outcome

Adapted from Campo and Fritz. (2)

conversation referring to the possibility that the symptoms may be related to stress, temperamental sensitivity, anxiety, or whatever term may be tolerated by the family to facilitate acceptance of a behavioral intervention or even a request for psychological or psychiatric consultation.

It is important for pediatricians to recognize their own responses to the family resistance and reluctance to lay aside the “search for disease” and not inadvertently convey by word or body language their own frustration about the difficult and time-consuming task they are facing.

A primary reason that many patients and their parents are angry and reject the diagnosis of somatization disorder is that they feel disrespected and not believed: “You think it is all in my head, but I know I hurt and that there is something wrong.” In part, this conception relates to the unfortunate term “psychosomatic,” which conveys the mistaken notion of a body-mind duality and for some individuals still carries the connotation of being crazy (“psycho”). Therefore, it is important to explain that the “functional versus organic” paradigm is old-fashioned and does not reflect current thinking, which suggests a more complex interplay of multiple factors, including genetic and biochemical components predisposing to the patient’s symptoms.

Essentially, the pediatrician must convey an understanding that the patient’s pain is real; that is, the doctor has learned and believes that pain is due to a neural nociceptive component and an affective component,

both processed by the central nervous system and influenced by personal experience, genetics, and the environment. To help patients and parents become more open to the concept of somatization, they can be reminded of how themes in everyday language acknowledge the connection between emotions and bodily processes. For example, we talk about having a “gut reaction,” having “butterflies in my stomach,” feeling “all choked up,” or that something “makes me vomit.” In addition, embarrassment can manifest as blushing, fear as cold sweat, and anger as stiffening muscles and clenching teeth, thus facilitating explanations such as “blushing of the gut” and “spastic colon.” Another way to help patients and parents view somatization is as a sensitivity, a phenomenon of “amplification” of otherwise normal body sensations, similar to the role of the amplifier in the transmission of music. (44)

At the center of any successful program is the untiring effort to motivate patients and parents toward a partnership with the doctor in dealing with the symptoms and complaints. Although it could be argued that the risk of antagonizing patients and parents by presenting a diagnosis of somatization and causing them to leave the practice for “doctor shopping” would recommend the policy of helping patients by medicating them symptomatically with analgesics, tranquilizers, anxiolytics, and other agents from the pharmacopeia, such action tends to be only a short-term solution. Although tempting and certainly easier, such an approach may only reinforce the search for the “magic pill” and a never-ending pursuit of a technological solution.

At a deeper level, the reason for informing patients and families about the nature of the disorder involves the principle of respect for persons because it is an ethical duty, with few exceptions, for clinicians to share with patients their understanding of their situation.

The primary exception to this rule, which allows for justified paternalism and “face-saving” suggestive therapies, may apply to those patients who have conversion disorders and cannot make use of the information. The diagnosis of somatization should not lead a patient or parent to the perception that this diagnosis will be raised as a barrier to preempt future complaints. Instead, it should become clear that the diagnosis is made in the spirit of offering an interpretation that may call for newer and more effective treatments, such as stress management and individual or family counseling. Somatoform disorders do respond to treatment and rehabilitation. Cognitive and behavioral interventions; use of positive and negative reinforcements; and self-monitoring tech-

niques such as hypnosis, relaxation, and biofeedback have been proven successful. (1)(2)(3)(4)(45)(46)

Many patients miss school because of their symptomatology. This practice can develop into a full-blown school avoidance syndrome. This evolution often is not recognized by the parents because “my child loves school and wants to go” (which may actually be true, but the child is unable to do so). Family counseling and good communication between the clinician and the school can aid in addressing this situation. The instruction is that the child must be brought to school and stay in the building. Class attendance is not mandatory but going to school is. If need be, the child may rest in the school infirmary, a quiet area, or the library. There is no returning home unless the child is febrile. Class attendance usually follows spontaneously. Parents must be prepared for the difficult days, which often occur on Sunday evening and the last vacation day before returning to school. Reaching this type of agreement can be facilitated by one of the parents being ready and willing to help the other.

A patient not responding to intensive treatment should be evaluated for the possibility of comorbidity such as a mood disorder, anxiety disorder, and substance abuse, which should be identified and treated to assure successful treatment. The presence of comorbid conditions is why pediatricians treating children who have recurrent somatic complaints must become familiar with screening for anxiety disorder, depression, attention-deficit/hyperactivity disorder, substance use disorder, and conduct disorder.

Judicious use of psychopharmacologic treatment in somatoform disorders may be appropriate when comorbid depression or anxiety is suspected or the severity of symptoms has led to significant and prolonged impairment. Once the pediatrician can convince the patient and family to seek additional treatments, such as psychological therapy or evaluation for the use of medication, it is important for the consulting mental health professional to receive a detailed description of what led to the consultation because that history may be missing from the patient’s narrative.

Conversely, the psychiatrist or psychologist must be asked to provide feedback to the pediatrician because some families may report that the mental health clinician said there was “nothing wrong, it was all medical.” The consultant should be expected to tell the referring pediatrician what services will be provided and what the pediatrician is expected to monitor. For pediatricians who are sophisticated in the use of counseling and psychotropic medications, a mental health referral might not be necessary.

Often, families worry that the diagnosis of somatization will be followed by abandonment by the physician. This concern can be dispelled by arranging frequent follow-up visits, which have the potential to “preempt” the frequent emergence of new symptoms, prevent emergency department visits, and ease the overall management of symptoms. It is helpful to emphasize that all forthcoming symptoms will be examined with the attention they deserve because somatizing under stress is very common and does not “provide immunity” against appendicitis, flu, pneumonia, and other conditions. Most families, even when disagreeing with their physicians, can accept (albeit grudgingly) treatment recommendations if they are assured of an attentive, open-minded, and regularly scheduled follow-up.

The payment structure of medical services can conspire against optimal care for patients who have somatization disorders. In part, this situation has evolved because procedural interventions historically have been valued by insurance companies above spending time with patients and in part because many insurers “carve out” these types of disorders exclusively for treatment through the mental health insurance coverage. Frequently, such “carve outs” mean that patients must pay their pediatricians out of pocket or from their mental health benefits, which rarely is allowed. At other times, services simply go unpaid.

Depending on contractual arrangements, pediatricians currently have three less-than-satisfying options: 1) accept the rate of reimbursement for their services and bill the rest to the family, 2) refer the family to a consultant and coordinate care, or 3) negotiate directly with the payer about the case. The reason to expend all this effort is that gaining expertise in this type of work can make a great difference in the life of children, and the effort is rewarded by success and enormous professional satisfaction.

Prognosis

With appropriate intervention, the prognosis for most somatization disorders in children and adolescents is very good. On occasion, somatization is the proverbial “tip of the iceberg” that calls attention to a psychiatric disorder necessitating mental health consultation and treatment. Unfortunately, many untreated children risk continuous somatization as adults. (47)(48)(49)(50) The most severe form, the undifferentiated somatoform disorder, is related to personality disorders, is of long duration, and has a persistent course.

Summary

- *The Diagnostic and Statistical Manual for Primary Care (DSM-PC) Child and Adolescent Version (8)* contains a useful pediatric classification of somatization disorders that is based on consensus due to lack of relevant clinical studies.
- Based on some research evidence, somatization disorders occur in children who are genetically predisposed and exhibit trait anxiety, anxiety sensitivity, and alexithymia. (13)(14) There is concordance in identical twins.
- Environmental factors are suggested by the presence of models in the family and the preponderance of these conditions among children of families living in lower socioeconomic strata.
- Stress is an important contributory factor; the possibility of bullying or physical or sexual abuse must be considered.
- Adolescents who have somatoform pain disorders are often afflicted by alexithymia.
- Agreement on the management of somatization disorders outlined in this article is based on consensus. Patients who do not respond to pediatric intervention may suffer from comorbidity such as an anxiety or mood disorder.

Advocacy

From a professional development perspective, advocacy work must continue to emphasize that change in medical economics is needed, specifically, that the financial impact of somatization on utilization must be addressed. (51) Increased funding is needed for both research and training in an area that has such great impact on quality of life. Teaching about this subject needs to be incorporated into the medical education of medical students, residents, subspecialty fellows, and postgraduate students to increase all clinicians' level of comfort and sense of effectiveness in dealing with somatization disorders.

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PIR Quiz

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5. Which of the following statements regarding somatization disorders in children is true?
 - A. Neurologic symptoms are the most common manifestation in infants.
 - B. Symptoms are generally feigned with a secondary gain in mind.
 - C. They are more common in children who are encouraged to openly display their fear or anger.
 - D. They are more common in children who have a family member with a chronic disease.
 - E. They occur more often in higher socioeconomic groups.

6. You are evaluating a 16-year-old girl who complains of fatigue for the past 3 months. She reports no fever, weight loss, or pain. She has difficulty sleeping at night and decreased appetite, and she has quit her after-school drama class, which she previously enjoyed. Her family history reveals a mother who has depression and fibromyalgia. Except for a flat affect, her physical examination results are normal. Which of the following is the most likely diagnosis in this patient?
 - A. Conversion disorder.
 - B. Depression.
 - C. Somatic complaint problem.
 - D. Somatoform disorder, not otherwise specified.
 - E. Undifferentiated somatoform disorder.

7. A 10-year-old boy comes to your clinic with a 2-month history of intermittent vision loss that lasts for several minutes and resolves spontaneously. He describes a complete loss of vision in both eyes, and he has missed approximately 20 days of school. He denies other symptoms. His family history reveals a grandmother who lives with them and who has Alzheimer disease. Because of financial strain, he has been asked to care for his grandmother in the afternoons and evenings. An ophthalmologic evaluation 3 weeks ago showed normal findings. On physical examination, he reports normal vision and appears indifferent to his reported symptoms. Findings on examination are normal, including the neurologic examination. Which of the following is *most* likely?
- A. Anxiety disorder.
 - B. Conversion disorder.
 - C. Optic neuritis.
 - D. Somatic complaint variation.
 - E. Undifferentiated somatoform disorder.
8. You have diagnosed undifferentiated somatoform disorder in an adolescent girl who has recurrent abdominal pain. Even though she has no weight loss, diarrhea, or other symptoms and her examination findings are normal, her parents are concerned that she may have inflammatory bowel disease because her grandmother has Crohn disease. Which of the following should you do at this time?
- A. Arrange a series of follow-up visits to monitor how she is doing and develop a program to help her and explain the connection between emotions and bodily functions to the patient and her family.
 - B. Conduct a thorough search for pathologic causes, including endoscopy and upper gastrointestinal radiographic series.
 - C. Assess whether there is occult blood in stools, obtain a C-reactive protein measurement, and reassure the family that nothing is wrong and that the pain will resolve.
 - D. Encourage the girl to ignore her pain because it is not real pain and she needs to learn how to live with it.
 - E. Refer the girl to a child psychiatrist for a psychopharmacology consultation to consider anxiolytic therapy.

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