

What is the differential diagnosis of chronic diarrhea in immunocompetent patients?

EVIDENCE-BASED ANSWER

Case series from tertiary-care centers report toddler's diarrhea, cow's milk sensitivity enteropathy, infection, celiac disease, and idiopathic chronic diarrhea as the most common etiologies in the pediatric population. In adults, the most common etiologies were secretory diarrhea (idiopathic, laxative abuse, irritable bowel syndrome, diabetes mellitus, and fecal incontinence), malabsorption (pancreatic disease, noninflammatory short bowel syndrome, postgastrectomy, hyperthyroidism, and cholestasis), microscopic colitis, inflammatory bowel disease, celiac sprue, and radiation colitis. (Grade of recommendation: C, based on case series.)

EVIDENCE SUMMARY

Five case series of chronic diarrhea patients were identified. The largest adult study evaluated

193 patients referred to a tertiary-care center for diarrhea.¹ Another adult study evaluated 103 patients referred to the same tertiary-care center. It is unclear whether these patients had a prior workup for chronic diarrhea.² Secretory diarrhea was the most common etiology overall in the 2 series (21% and 45%, respectively). Other etiologies included malabsorption (35% and 28%), microscopic colitis (15% and 9%), inflammatory bowel disease (16% and 10%), and celiac sprue (0% and 3%).^{1,2}

The largest pediatric study included 381 children from a tertiary-care center with chronic diarrhea defined as lasting longer than 14

days.³ In this case series, 31% of children had toddler's diarrhea, defined as chronic diarrhea with no definitive cause in an otherwise healthy baby who is growing normally. Cow's milk sensitivity enteropathy com-

prised an additional 30% of cases. Etiologies for diarrhea in the remaining cases were infectious (11.8%), idiopathic (8.9%), celiac (7.3%), and other (10.2%).

A small tertiary-care pediatric study defining chronic diarrhea as occurring for more than 3 weeks and dependent on parenteral nutrition for more than 50% of daily caloric intake included only 20 patients.⁴ The diagnoses included autoimmune enteropathy, congenital microvillous atrophy, chronic intestinal pseudo-obstruction, and multiple food intolerance.

A case series study from India evaluated 47 children over 6 months of age who had diarrhea for more than 15 days and were unresponsive to medications (mostly antibiotics) or relapsing after treatment.⁵ The diagnoses included tropical enteropathy (46.8%), nonspecific diarrhea (21.8%), giardiasis (14.8%), irritable bowel syndrome (10.6%), and celiac disease (6.8%), although these findings probably do not apply to patients in more developed countries.

RECOMMENDATIONS FROM OTHERS

The American Gastroenterological Association divides the differential diagnoses of chronic diarrhea into 4 categories based on stool characteristics (Table).⁶ A recent review article states that the most common cause among infants taking formula is protein intolerance; for toddlers, irritable colon of infancy, protracted viral enteritis, and giardiasis; and for children and adolescents, ulcerative colitis, Crohn's disease, and primary acquired lactose intolerance.⁷

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CLINICAL COMMENTARY

The patient's history often provides vital clues to etiology. A number of medications, both prescription and nonprescription, may cause diarrhea. If blood or mucus in stool, abdominal pain, and fever are present, inflammatory diseases of the bowel come to mind. Diarrhea that never awakens the patient from sleep is often caused by bowel hypermotility. Malabsorptive diarrhea should abate with fasting. Copious diarrhea that persists with fasting is usually secretory in mechanism.

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TABLE
MAJOR CAUSES OF CHRONIC DIARRHEA CLASSIFIED BY TYPICAL STOOL CHARACTERISTICS⁶

<p>Osmotic diarrhea Mg²⁺, PO₄⁻³, SO₄⁻² ingestion Carbohydrate malabsorption</p>
<p>Fatty diarrhea Pancreatic disease Short-bowel syndrome Postgastrectomy syndrome Hyperthyroidism Cholestasis Other malabsorption syndromes</p>
<p>Inflammatory diarrhea Inflammatory bowel disease Infectious diseases Ischemic colitis Radiation colitis Neoplasia</p>
<p>Secretory diarrhea Irritable bowel syndrome Laxative abuse Fecal incontinence Congenital syndromes (chloridorrhea) Idiopathic secretory diarrhea Bacterial toxins</p>
<p>Drugs and poisons Disordered motility Neuroendocrine tumors Neoplasia Addison's disease Epidemic secretory (Brainerd) diarrhea</p>