Runaways

### Prompt:  
  
"I have a 16-year-old female patient, a high school athlete and student, who presents to the emergency department with sudden onset severe abdominal pain and vomiting that started approximately three hours ago after a family function. She also reports blood in her vomit, which has raised concerns for her family. The patient has a history of occasional stomachaches but has generally been healthy, with no significant medical or surgical history apart from a recent bout of strep throat treated with antibiotics.   
  
On examination, she appears anxious and is clutching her abdomen. Her vital signs show mild tachycardia, but she is afebrile. Abdominal palpation reveals tenderness in the epigastric region, and there is mild distention without any palpable masses.   
  
Initial laboratory tests show a mild elevation in white blood cell count. An abdominal ultrasound has been performed, which failed to identify any clear causes of the pain but did show evidence of a possible gastrointestinal obstruction.   
  
Given the acute presentation, age, and current findings, what are the likely differential diagnoses to consider, and what further tests would you suggest to either confirm or rule out the suspected condition?"  
  
### Expected LLM Response:  
  
"This clinical scenario presents a young athlete with acute abdominal pain and hematemesis, which raises several considerations in terms of underlying causes. Here are potential differential diagnoses and appropriate next steps:  
  
Differential Diagnoses:  
  
1. \*\*Ascariasis (Intestinal parasitic infection)\*\*: This tropical disease involves infection by Ascaris lumbricoides, which can cause intestinal obstruction and may present with abdominal pain, nausea, and vomiting. It's particularly known to cause complications in individuals who have recently traveled to endemic regions. It's also relevant given her recent gastrointestinal symptoms.  
  
2. \*\*Peptic Ulcer Disease\*\*: The presence of blood in her vomit suggests the possibility of bleeding from an ulcer or erosion in the gastrointestinal tract. The stress of athletic training and recent infection may contribute to this condition.  
  
3. \*\*Gastric or Duodenal Ulcer Perforation\*\*: This is a more serious condition that might present with sudden severe pain, particularly if it began acutely. The tenderness and mild distention observed could point to this complication.  
  
4. \*\*Mesenteric Ischemia\*\*: This can occur due to inadequate blood flow to the intestines and may cause abdominal pain that worsens over time. It has to be considered especially since she is an athlete, and any underlying vascular conditions are possible.  
  
5. \*\*Pancreatitis\*\*: Although less common at this age without a pertinent history (e.g., alcohol use or gallstones), it's important to consider if there is a possibility of anatomical abnormalities.  
  
Recommended Diagnostic Tests:  
  
- \*\*CT scan of the abdomen\*\*: A contrast-enhanced CT would provide a clearer evaluation of the abdominal structures and help identify any obstructions, perforations, or other abnormalities that may have been missed in the ultrasound.  
   
- \*\*Upper gastrointestinal series or esophagogastroduodenoscopy (EGD)\*\*: If peptic ulcer disease is suspected, these tests could help visualize the mucosa for signs of ulcers or erosions causing bleeding.  
  
- \*\*Stool tests\*\*: To check for the presence of ova or parasites, particularly for ascariasis, if that is suspected based on travel or exposure history.  
  
- \*\*Laboratory tests (Amylase/Lipase)\*\*: To rule in or out pancreatitis based on the enzyme levels.  
  
- \*\*Further evaluation for liver function tests\*\*: Given the blood in vomit, assessing for potential liver-related causes might also be important.  
  
Overall, the combination of hematemesis, abdominal pain, and mild tachycardia should prompt immediate further evaluation to ensure timely management and address any potentially serious underlying conditions."  
  
### DISEASE:  
Ascariasis