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The *Hospital Physician Emergency Medicine Board Review Manual* is a peer-reviewed study guide for residents and practicing physicians preparing for board examinations in emergency medicine. Each quarterly manual reviews a topic essential to the current practice of emergency medicine.

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Acute Infectious Gastrointestinal Disorders

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Acute Infectious Gastrointestinal Disorders

Christopher Fee, MD, and Jacqueline A. Nemer, MD, FACEP

INTRODUCTION

Patients with acute gastrointestinal (GI) infections can present with a number of symptoms, including odynophagia, dysphagia, dyspepsia, nausea, vomiting, diarrhea, and abdominal pain as well as systemic symptoms of fever, chills, and general malaise. However, these symptoms are among the most common presenting complaints encountered in the emergency department (ED) and are frequently seen in many other medical and surgical problems. The challenges for the emergency medicine physician are to recognize acute GI infections and to identify which patients require diagnostic testing and disease-specific treatment versus supportive care. Most patients with GI infections require only supportive care and appropriate counseling regarding ways to avoid spread of infection (eg, food-handling and hand-washing).

Acute GI infections may have a viral, fungal, bacterial, or parasitic etiology. GI infectious illness may result following consumption of contaminated food or water, fecal-oral transmission of pathogenic agents, overgrowth of normal bacterial flora due to antibiotic use, or colonization by *Helicobacter pylori*. Patients with compromised immune systems are particularly susceptible to GI infections.

ESOPHAGITIS

Viruses, fungi, or bacteria can infect the esophagus. The symptomatology for each of these infections may be similar. History and physical examination findings may help to differentiate between the causative agents.

VIRAL

Viral esophagitis is most commonly caused by herpes simplex virus (HSV), varicella-zoster virus (VZV), or cytomegalovirus (CMV). Esophagitis due to HSV-1 or VZV may be seen in immunocompetent patients, while HSV-2 and CMV esophagitis are rarely seen in these patients. HSV-2, VZV, and CMV infections occur more frequently in the immunocompromised. Symptoms of

viral esophagitis include odynophagia, dysphagia, nausea, vomiting, fever, chills, and acute chest pain. In severe cases of all types of esophagitis, hematemesis can occur. The physical examination may be normal, or there may be disease-specific symptoms such as herpetic vesicles on the nose, lips, and mouth. If external vesicles are not seen, diagnosis can usually be confirmed by endoscopy through tissue sampling and microscopic testing. Antiviral agents such as acyclovir, ganciclovir, and foscarnet are used to treat viral esophagitis. The specific agent and dosages vary depending on the type and extent of viral infection.^{1,2}

FUNGAL

Candida species are the major cause of fungal esophagitis. This condition is mostly seen in immunocompromised patients, such as those with HIV infection, cancer, or diabetes. Patients typically present with odynophagia and dysphagia, but these symptoms are sometimes absent. It is rare for patients to have significant systemic symptoms or bleeding. Examination may reveal clues such as classic mucocutaneous findings or white patches of oral thrush, although the absence of these external findings does not exclude fungal infection. Endoscopy can confirm the diagnosis through tissue sampling and microscopic testing. Treatment options include nystatin, clotrimazole, ketoconazole, fluconazole, miconazole, or amphotericin.^{1,2}

BACTERIAL AND PROTOZOAL

Bacterial and parasitic esophagitis are uncommon. In the immunocompromised patient, *Lactobacillus*, β -hemolytic streptococci, *Cryptosporidium*, *Pneumocystis carinii*, and *Mycobacterium tuberculosis* have been reported as causative agents. Bacterial or protozoal esophagitis are usually a co-infection with a virus or fungus.² Treatment should be guided by culture results.

GASTRODUODENITIS AND GASTRITIS

Gastritis is inflammation of gastric mucosa, while gastroduodenitis involves the duodenum in addition to the stomach. Inflammatory changes can have infectious,