

Oral Manifestations of Gastrointestinal Disorders

Lina Maria Mejia, DDS, MPH

KEYWORDS

- Gastrointestinal • Gastroesophageal • Ulcerative colitis • Crohn's disease • Extra-abdominal • Pyostomatitis vegetans
- Aphthous ulcers • Hepatitis

KEY POINTS

- Dentists are often the first health care professionals to identify a systemic disease. Oral manifestations can be the initial indication of gastrointestinal (GI) disease and allow for an early diagnosis, treatment, and improved prognosis.
- The oral lesions associated with GI disease are multiple.
- Dental erosion is related to patients with gastroesophageal reflux disease, bulimia, or anorexia. Oral ulcerations, diffuse mucosal swelling, cobblestone mucosa, mucogingivitis, pyostomatitis vegetans, and others are lesions associated with IBD (Crohn's disease and ulcerative colitis).
- Crohn's disease is a chronic inflammatory process that can involve any part of the GI tract.
- Liver disease can cause bleeding abnormalities; care must be exercised when prescribing medications that are metabolized in the liver.

Introduction

The oral cavity is a mirror that reflects many of the human body's internal secrets; this concept was highlighted in the US Surgeon General's report Oral Health in America in 2000.¹

The oral cavity is diagnostically accessible, so alterations can be the first indication of systemic diseases and may possibly allow for an early diagnosis, treatment, and enhanced prognosis.²⁻⁵

Astute dentists may be the first health care professionals to identify a systemic disease through observation of its oral manifestations. Through the inspection of the oral cavity, signs and symptoms such as persistent pain, halitosis, ulcerations, swelling, bleeding, and/or xerostomia might raise suspicion of systemic disease that includes the gastrointestinal (GI) tract.^{6,7}

The oral lesions may be the first sign of GI disease, sometimes before the clinically apparent onset of the abdominal disease. These oral signs maybe present during the disease process or persist even after the abdominal disease has resolved. As an example, in the inflammatory bowel diseases (IBDs) Crohn's disease (CD) and ulcerative colitis (UC), oral manifestations, such as oral ulcerations, diffuse mucosal swelling, cobblestone mucosa, and localized mucogingivitis, may be the first sign of GI disease. Gastroesophageal reflux disease (GERD), bulimia, or anorexia, may cause irreversible dental erosion due to the exposure of tooth enamel to acidic gastric content.⁸

The most common oral changes identified in GI diseases are dental erosion, erythema at various sites of the oral cavity, oral ulcers, gingivitis, periodontitis, and glossitis.⁹ Oral health care professionals are responsible for identifying, diagnosing, and treating oral conditions associated with GI diseases, along with providing appropriate dental care. This article reviews the oral changes observed in commonly occurring GI diseases.

Gastroesophageal reflux disease

GERD is caused by the rise of gastric contents, acidic and nonacidic, above the gastroesophageal junction (esophagus). GERD is a common condition in adults, affecting men and women equally, and occurs in all age groups. The prevalence increases in people older than 40 years.^{10,11} In the United States, approximately 20% of the population has GERD.¹²

The cause of GERD is multifactorial. The following are conditions that can increase risk of GERD:^{13,14}

- Obesity
- Certain foods and beverages, including chocolate, peppermint, fried or fatty foods, coffee, or alcoholic beverages
- Hiatal hernia
- Delayed stomach emptying
- Pregnancy
- Smoking
- Asthma
- Diabetes
- Dry mouth
- Connective tissue disorders, such as progressive systemic sclerosis (scleroderma).

Disclosures: No relationship with a commercial company.

Department of Oral Medicine and Diagnostic Sciences, College of Dental Medicine, Nova Southeastern University, 3200 South University Drive, Fort Lauderdale, FL 33328-2018, USA

E-mail addresses: lm1273@nova.edu, Lina.Mejia@nova.edu

The typical symptoms of GERD include heartburn, regurgitation, dysphagia, and retrosternal pain. Furthermore, abnormal reflux can cause a wide range of atypical symptoms, including sleep disturbance, coughing, laryngitis, hoarseness, asthma, chronic obstructive pulmonary disease, unexplained chest pain, angina, sinusitis, otalgia, halitosis, dental erosion, and other dental manifestations (Box 1).^{15–17} The frequency in which patients experience symptoms is varied.¹⁸ Approximately 7% to 10% of Americans experience symptoms of GERD on a daily basis, and it has been reported that 25% to 40% of Americans experience symptomatic GERD at some point during their lives.^{19,20} The number of individuals affected is probably higher due to the control of symptoms with over-the-counter (OTC) medications without consulting a medical professional.²¹

GERD complications include premalignant and malignant conditions of the esophagus. One of the main purposes in evaluating patients with chronic symptoms of GERD is to recognize Barrett esophagus (BE). BE is a precursor to esophageal adenocarcinoma (EAC). In EAC, there is squamous metaplasia from the normal squamous epithelial lining to columnar epithelium containing goblet cells.^{22–24} Fortunately, approximately half of the patients examined do not manifest macroscopic changes of the esophageal mucosa. Serious endoscopic findings are identified in 10% of patients. BE is a complication with a 30-fold higher risk of development of EAC when compared with patients without this condition.^{25,26} On the other hand, most patients with BE die from reasons unrelated to adenocarcinoma of the esophagus.^{26,27}

Long-standing GERD is the main risk factor for the development of BE. Other risk factors, such as male gender, advanced age, white race, obesity, hiatal hernia, and smoking, have to be considered to assess and counsel the patient effectively. Patient counseling is provided to reduce modifiable risks, such as nutrition and tobacco use, and to determine the need for endoscopy and biopsy.^{23,28}

Medical management

The initial management of GERD relies on reviewing and eliminating modifiable factors, and/or providing safe efficacious acid suppressive therapy. For instance, advise weight loss for obese patients with GERD. Study outcomes show that weight loss over a 6-month period led to a significant

improvement in GERD symptoms in 81% of the subjects; 65% had complete resolution and 15% had partial resolution of reflux symptoms.^{13,29–31} GERD symptoms are improved with tobacco cessation due to the increase of saliva production. Moreover, patients suffering from GERD symptoms during the night should be coached to avoid late-night snacks and meals with high fat content. Fatty meals delay gastric emptying and produce distention and reflux. Sleeping with the head raised on 2 or 3 pillows or tilting the bed frame might dramatically improve symptoms.

Several medications are available to treat GERD, including antacids such as Maalox, Mylanta, Rolaids, histamine 2 (H2) receptor antagonists (RAs), and proton pump inhibitors (PPIs).³² H2RAs have been used since the mid-1970s to treat GERD and peptic ulcer disease. In patients with GERD, H2RAs improve the symptoms of heartburn and regurgitation and heal mild to moderate esophagitis. Types of H2 blockers include cimetidine, famotidine, nizatidine, and ranitidine. PPIs are the most common pharmacologic treatment used for GERD because of their potent acid suppression.³³ PPIs heal erosive esophagitis more efficaciously than do H2RAs and provide resolution of signs and symptoms, including ulcers and/or esophageal damage. PPIs, such as omeprazole (also available OTC), lansoprazole, esomeprazole, pantoprazole, and rabeprazole, are available by prescription.

Surgical treatment is reserved for patients who do not respond to medical therapy. Patients with a good initial response to medical therapy but who have severe functional and anatomic abnormalities of the gastroesophageal junction are those who are most commonly treated with surgery.^{29,34}

Oral manifestations and considerations

Oral findings in patients with GERD include periodic increase in salivation, xerostomia (dry mouth), burning sensation, tongue sensitivity, halitosis, palatal erythema, oral ulcers (gingiva), dysgeusia (foul taste), gingivitis, periodontitis, dental thermal sensitivity and/or pulpitis, and dental erosion.¹⁷ Dental erosion is defined as the loss of tooth substance by chemical processes (acid exposure) not involving bacteria. Repeated or prolonged exposure of teeth to acid leads to selective dissolution of specific components of the tooth surface, with eventual loss of tooth substance, hypersensitivity, functional impairment, and even tooth fracture. The degree of dental erosion due to GERD is associated with the extent of the disease, frequency of reflux, the pH and type of acid, and the quantity and quality of saliva.^{7,9,11}

The distribution of erosion in patients with GERD affects the occlusal surfaces of the posterior mandibular teeth and the palatal surfaces of the maxillary anterior teeth. Affected teeth exhibit worn, smooth, silky glazed, or shiny enamel. They may appear yellow and become sensitive to temperature changes as the underlying dentin becomes exposed. More advanced stages of dental erosion disclose changes in the tooth morphology, resulting in a concavity in the enamel, the width of which clearly exceeds its depth. Further progression of occlusal erosion leads to a rounding of the cusps and, in severe cases, the whole occlusal morphology disappears and pulp exposure may occur (Figs. 1–3).^{9,17,35}

Dental erosion is irreversible and may require dental restorative treatment. Soft tissue oral findings will usually resolve with medical management of GERD.^{8,11,16,35}

Box 1. Gastroesophageal reflux disease signs and symptoms

Primary symptoms

- Heartburn
- Regurgitation
- Dysphagia

Abnormal reflux atypical symptoms

- Coughing and/or wheezing
- Hoarseness, sore throat, laryngitis
- Asthma
- Otitis media
- Noncardiac chest pain
- Enamel erosion or other dental manifestations
- Halitosis (bad breath)

Download English Version:

<https://daneshyari.com/en/article/5638145>

Download Persian Version:

<https://daneshyari.com/article/5638145>

[Daneshyari.com](https://daneshyari.com)