

Diagnosis and Treatment of Rumination Syndrome

Magnus Halland, John Pandolfino, and Elizabeth Barba

Division of Gastroenterology and Hepatology, Department of Medicine, Feinberg School of Medicine, Northwestern University, Northwestern Memorial Hospital, Chicago, Illinois

Rumination syndrome is a functional gastrointestinal disorder characterized by effortless postprandial regurgitation. The disorder appears uncommon, although only limited epidemiologic data are available. Awareness of the characteristic symptoms is essential for recognizing the disorder, and thus avoiding the long delay in diagnosis, that many patients experience. Although objective testing by postprandial esophageal high-resolution impedance manometry is available in select referral centers, a clinical diagnosis can be made in most patients. The main therapy for rumination syndrome is behavioral modification with postprandial diaphragmatic breathing. This clinical practice update reviews the pathophysiology, diagnosis, and treatment of rumination syndrome.

Best Practice Advice 1: Clinicians strongly should consider rumination syndrome in patients who report consistent postprandial regurgitation. Such patients often are labeled as having refractory gastroesophageal reflux or vomiting.

Best Practice Advice 2: Presence of nocturnal regurgitation, dysphagia, nausea, or symptoms occurring in the absence of meals does not exclude rumination syndrome, but makes the presence of it less likely.

Best Practice Advice 3: Clinicians should diagnose rumination syndrome primarily on the basis of Rome IV criteria after an appropriate medical work-up.

Best Practice Advice 4: Diaphragmatic breathing with or without biofeedback is the first-line therapy in all cases of rumination syndrome.

Best Practice Advice 5: Instructions for effective diaphragmatic breathing can be given by speech therapists, psychologists, gastroenterologists, and other health practitioners familiar with the technique.

Best Practice Advice 6: Objective testing for rumination syndrome with postprandial high-resolution esophageal impedance manometry can be used to support the diagnosis, but expertise and lack of standardized protocols are current limitations.

Best Practice Advice 7: Baclofen, at a dose of 10 mg 3 times daily, is a reasonable next step in refractory patients.

Keywords: Rumination Syndrome.

Rumination syndrome is a functional gastrointestinal disorder of unknown etiology characterized by effortless, often repetitive, regurgitation of recently ingested food into the mouth.^{1,2} The regurgitated material can either be chewed and reswallowed or expectorated by the patient. Typically, regurgitation is not preceded by nausea or retching and is not selective

for liquids or solids. The clinical implications of rumination syndrome range from a relatively minor social inconvenience to disabling nutritional impairment.² Rumination episodes are induced by an increase in intragastric pressure, which is generated by a voluntary but unperceived and unintentional contraction of the abdominal wall musculature. When this increase in gastric pressure overcomes the pressure of the lower esophageal sphincter, gastric content can flow freely into the esophagus and mouth.³ Not unsurprisingly, patients typically use the word vomiting to describe rumination events, and many patients are misdiagnosed as having refractory vomiting, gastroesophageal reflux disease, or gastroparesis. A long delay in receiving a diagnosis is common and can lead to unnecessary testing, a reduced quality of life, and even invasive procedures such as surgery or feeding tubes.^{2,4,5}

Methods

The recommendations outlined in this review are based on expert opinion and on relevant publications from PubMed and Embase (through February 2018) without a formal systematic review of evidence. To identify relevant ongoing trials, we queried clinicaltrials.gov. The Clinical Practice Updates Committee of the American Gastroenterological Association has reviewed these recommendations.

Epidemiology

Rumination syndrome is thought to be uncommon, but epidemiologic data on the incidence and prevalence are very limited.^{2,6} The prevalence in adults was found to be 0.8% and 0.9%, respectively, in 2 population-based studies from Australia and Mexico, which combined included 3000 people.^{7,8} A much higher prevalence has been reported among special populations such as patients with eating disorders and fibromyalgia, in which

Abbreviations used in this paper: EMG, electromyography; HRIM, high-resolution impedance manometry.

© 2018 by the AGA Institute
1542-3565/\$36.00

<https://doi.org/10.1016/j.cgh.2018.05.049>

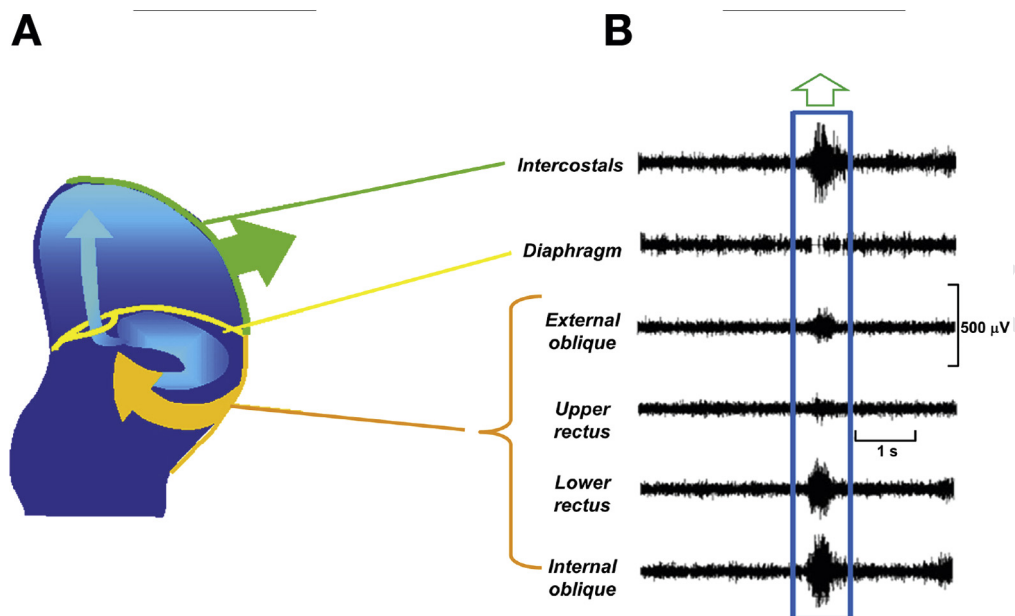


Figure 1. Muscular mechanism of rumination by electromyography. (A) Rumination (light blue arrow) occurs as a result of abdominal compression (orange arrow), coupled with chest expansion (green arrow). (B) Electromyography showing increased intercostal activity and abdominal wall activation during rumination events (blue box).

print & web 4C/FPO

7% to 8% of patients reported rumination syndrome.^{9,10} Very few studies are available in pediatric and adolescent populations. A cross-sectional study of 1231 children aged 0 to 48 months in Colombia found that rumination syndrome was the second most common functional gastrointestinal disorder, with a prevalence of 4.7%.¹¹ In a questionnaire-based study of 2161 adolescents from Sri Lanka, 5.1% of responders fulfilled the clinical criteria for rumination syndrome, of whom 12% reported significant functional impairment secondary to their rumination symptoms.¹² Some of the earliest observations of rumination in human beings suggested that the syndrome occurs predominantly among children and adults with development delay,^{13–15} but more recent case series and studies have suggested that most patients with rumination are of normal intellect.^{3,5,16} Because of the lack of awareness among many physicians, it is conceivable that the true prevalence of rumination syndrome is underestimated.

Etiology and Pathophysiology

The exact pathogenesis of rumination syndrome remains incompletely understood. The hallmark feature of rumination syndrome is the postprandial retrograde flow of ingested gastric content into the mouth of the patients. Mechanistically, this is thought to occur owing to a combination of increased intra-abdominal pressure coupled with negative intrathoracic pressure, resulting in a permissive esophagogastric gradient (Figure 1). However, few, if any, healthy people have the ability to induce rumination and thus an unrecognized central reflex mechanism also might be at play. Rumination events have been characterized with gastroduodenal manometry, abdominal wall electromyography (EMG), and high-resolution impedance manometry (HRIM) in various studies (Figure 2). Typical findings during a gastroduodenal manometry include a characteristic spike pattern recorded simultaneously across all sensors, termed the “R” wave.¹⁷ During EMG recordings,

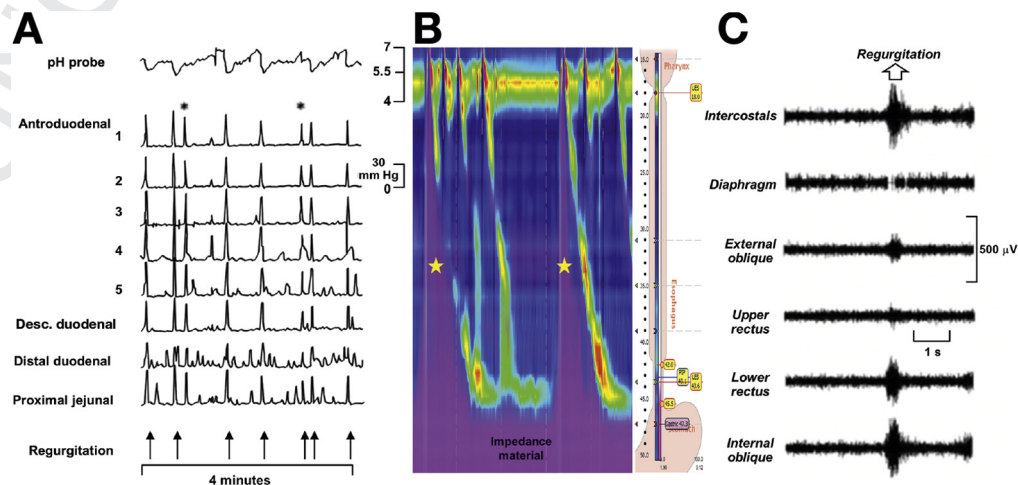


Figure 2. (A) Rumination shown on gastroduodenal manometry; R waves are marked with asterisks and coincide with regurgitation. (B) High-resolution impedance manometry; impedance detected rumination events noted with stars. (C) Electromyography shows activation of intercostal and abdominal wall muscles during rumination. Desc., _____.

print & web 4C/FPO

Download English Version:

<https://daneshyari.com/en/article/10217846>

Download Persian Version:

<https://daneshyari.com/article/10217846>

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