

Oral Complications in Children Undergoing Chemotherapy: The COMEDY (Clenching, Oral Mucositis, Eyes, DYsphagia) Pattern

To the Editor:

While early diagnosis and advances in cancer therapy for children continue to improve, oral complications remain a significant cause of morbidity and potential mortality. Oral mucositis (OM) is one of the most debilitating complications in children receiving cancer therapy, and it manifests with initial erythema, then ulcers and pseudomembranes.¹⁻⁴ Recent advances in understanding its pathologic mechanism indicate that OM is the consequence of a series of dynamic and interactive biological events involving the epithelia and submucosa in response to stomatotoxic agents. A number of factors such as treatment regimens, duration of treatment, dose intensity, and quality and quantity of saliva influence an individual's risk of mucositis.¹⁻⁴

Gastroesophageal reflux disease (GERD) occurs when the gastroduodenal contents reflux into the esophagus, causing symptoms and complications such as acid reflux, heartburn, and poststernal pain. GERD includes nonerosive reflux disease (NERD), reflux esophagitis, and Barrett's esophagus.⁵ Patients with NERD, the most common form of GERD, share symptoms with patients suffering from the other forms of GERD, but do not have endoscopic esophageal

mucosal damage or erosion. Research shows that most patients with NERD often also suffer from anxiety, depression, or other emotional disorders. At present, the etiology and pathogenesis of NERD remain unclear. Current studies suggest that the pathogenesis of NERD may be related to visceral hypersensitivity, esophageal motility, esophageal acid exposure, and changes of the esophageal mucosal barrier.⁵ Meanwhile, it has been found that the severity of NERD is related to social and psychological stress and has a clear relationship with mental factors, such as anxiety and depression. Children undergoing chemotherapy often experience dysphagia from NERD, which depends on both the therapeutic acidogenic regimens, and their level of anxiety and depression.⁵

On the basis of clinical observation, it can be highlighted that a link between NERD and a specific oral mucosal alteration, that is a diffuse, milky opalescent appearance of the mucosa, is the cause of pain and limitation of mouth opening; hypersalivation is often associated.

In children, the NERD-related dysphagia induces a defensive reaction to the act of swallowing, which leads them to clench their teeth throughout the day. Clenching induces a traumatic edema of the oral mucosa, which becomes whitish for an initial focal hyperkeratosis. Teeth imprints are visible on the oral mucosa as well as on the tongue, which appears festooned. Children complain of pain and suffer from difficulties in swallowing, chewing, and speaking. During a mouth examination, these children close their eyes and curve their shoulders; such unusual behavior is attributable to both a refusal of their hospitalization and to a defensive reaction to pharyngeal pain.

All these elements configure a whole nosological entity, which includes clenching, OM, closed eyes, and dysphagia, summarized in the acronym "COMEDY." Recognizing the COMEDY pattern in children undergoing chemotherapy could help to direct treatment toward a combination of conventional therapy (ie, proton-pump inhibitor) and psychotherapy to relieve depression and anxiety, accompanied by the use of oral mucosa coating agents and anti-inflammatory drugs to reduce oral pain.

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