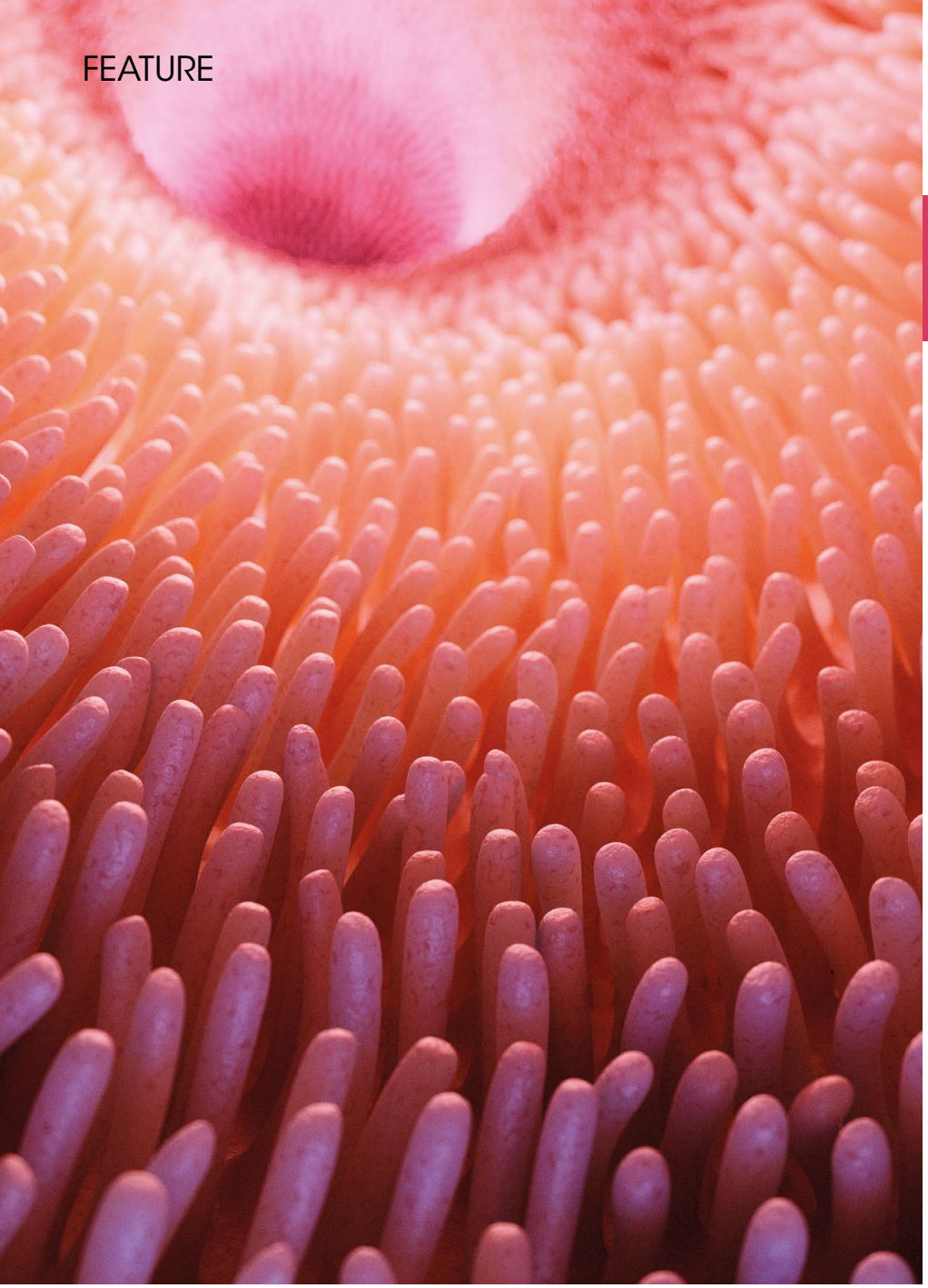


Oral health for patients with absorption-related illnesses



Canadian dental hygienist **Katherine Murphy**[1] explores common absorption disorders, their oral manifestations, and hygiene treatment recommendations.

Have you ever felt bloated or uncomfortable after eating and wondered what caused this? For a moment, imagine feeling this way often and never understanding how to resolve it. It would likely feel so overwhelming that one would lose interest in their nutrition overall, potentially resulting in a significant decrease in vital nutrients. Or perhaps one's body simply can't absorb nutrients, resulting in painful oral lesions.

Author information

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The most common cause of nutrient deficiency is malnourishment caused by a variety of disorders, including coeliac disease and inflammatory bowel disease, which is comprised of ulcerative colitis and Crohn's disease.[1] For dental hygienists, the first step is establishing the patient has a unique nutrient-based need, which will frame the care plan.

Common absorption disorders

Coeliac disease

Coeliac disease is a genetic autoimmune condition affecting the gastrointestinal tract upon ingestion of gluten. Gluten is a protein found in some grains, such as wheat, barley, and rye.[2] When someone with coeliac disease eats gluten, the lining of the small intestine becomes damaged and is unable to absorb nutrients properly.[2]

Typical symptoms of coeliac disease are abdominal pain, diarrhoea, and weight loss.[3] Patient bloodwork may also indicate signs of vitamin B12, folate, calcium, potassium, or iron deficiencies.[4] A sign of coeliac disease that may go unnoticed by patients is dermatitis herpetiformis, a skin condition that is caused by gluten intolerance.[5]

A patient with undiagnosed coeliac disease may present for a dental or hygiene appointment with aphthous-like ulcers that are unexplained and very painful. This can precede receiving a formal diagnosis by a medical doctor through bloodwork and nutritional counselling.[6]

There are more permanent oral manifestations of coeliac disease that dental clinicians may identify before a patient does, one example being enamel defects. Enamel defects include pitting, grooving, or, in severe cases, a complete loss of enamel and changes in tooth shape.[7]

The only treatment for coeliac disease is to adhere to a strict gluten-free diet for life.[8]

Inflammatory bowel disease (IBD)

Inflammatory bowel disease is defined by cyclic episodes of inflammation of the intestinal tract characterised by an exaggerated and abnormal response to gut microflora. It can be divided into two primary disorders: Ulcerative colitis and Crohn's disease.[9]

Ulcerative colitis is a chronic, incurable condition of unknown origin that causes inflammation along the mucosal lining of the colon, with periods of flare ups and remission.[10]

The main symptom of ulcerative colitis is bloody diarrhoea, with or without mucous. Associated symptoms also include urgency to void, abdominal pain, malaise, weight loss, and fever, depending on the extent and severity of the disease. The onset of the disease is typically gradual, and patients will likely experience periods of spontaneous remission and subsequent relapses. Factors that typically exacerbate ulcerative colitis include smoking cessation and nonsteroidal anti-inflammatory drug use.[10]

Crohn's disease is a chronic inflammatory disease that targets the digestive tract, and the cause is largely unknown. Symptoms include abdominal pain or cramps, diarrhoea, loss of appetite, weight loss, fatigue, and fever. Anaemia and nutrient deficiencies may occur due to intestinal inflammation.[11]

Oral manifestations are common in Crohn's disease and may be present as the first symptom. Early symptoms include aphthous ulcers, redness, oedema, and pain, and are predominantly found on the mucosa, lips, and tongue. The presence of lesions in the cavity was associated with an active period of the disease.[12]

> *'A patient with undiagnosed coeliac disease may present for a dental or hygiene appointment with aphthous-like ulcers that are unexplained and very painful.'*

The oral manifestations of IBD, including both Crohn's disease and ulcerative colitis, present clinically as angular cheilitis, gingivitis, persistent submandibular lymphadenopathy, xerostomia, gastric reflux, and halitosis, along with aphthous ulcerations, mucosal tags in the gingiva, and occasional oedema of the lips.[13]

The treatment for IBD involves changing dietary and lifestyle factors according to the patient's triggers, and medications to manage flare ups, such as corticosteroids, methotrexate, and sulfasalazine.[14]

A consideration for medications for all IBD patients is to observe their medications and document changes to track the correlation to flare ups. Corticosteroid treatment may cause osteoporosis or osteopenia, which may involve the alveolar bone. It can also lead to candidiasis or other oral infections resulting from immunosuppression. Often Crohn's disease patients are also prescribed steroids, resulting in similar oral side effects. Methotrexate can also cause oral ulceration. Sulfasalazine treatment may result in anaemia, and the oral manifestations may include glossitis, oral infection, or bleeding.[15]

There is no cure for IBD, however patients can learn to understand their own triggers and strictly avoid them.[16]

Recognising absorption disorders

Many of the oral manifestations of these absorption-related conditions are also known in dental hygiene as the classic signs of vitamin deficiencies. In dentistry, there is a marked need for increased recognition of the signs and symptoms and cross-professional referrals for diagnosis.[17] A set of disorders that impact a patient's ability to thrive, requires medical, dental, and research professionals to collaborate. It could be assumed that blood tests help determine whether patients have anaemia, low protein levels, or certain vitamin and mineral deficiencies due to malabsorption.

Motivational interviewing at a dental hygiene appointment coupled with a keen knowledge of oral manifestations of malabsorption may ultimately result in identifying a chronic or autoimmune disease that has been ignored, overlooked, or previously undiagnosed for some time. The patient would then have a chance to improve their overall health, and subsequently, oral care plans could be tailored to suit their specific need.[18]

Hygiene treatment recommendations

Hygiene treatment recommendations must take into consideration the specific needs and goals of the patient, along with any accommodations for the oral manifestations of their absorption disorder. For patients with coeliac disease and those who identify it as a trigger, it is vital that clinicians avoid using products that contain gluten. For all patients with absorption related disorders, oral lesions may be treated with topical steroids.[19] In the event that patients display signs of xerostomia, or other changes with salivary composition,

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increased topical fluoride application should be considered. Research suggests a correlation between decreased salivary flow and low nutritional score. Therefore, it would be assumed that nutritional counselling would be vital to curb carbohydrate intake, in the form of sugars or artificial sweeteners, for prevention of caries or gastrointestinal disturbances.[20]

Homecare suggestions for patients with absorption related disorders may include advising that toothpastes with sodium lauryl sulphate (SLS) be avoided as studies show that SLS is associated with oral ulcerations.[21] Patients should, however, be advised to use fluoridated toothpastes. These may be over the counter or by prescription, depending on the level of caries risk they exhibit.[22] For patients with absorption related disorders, exposure to triggers may induce vomiting. Therefore, patients who have this reaction should be advised to wait to brush their teeth until 20 to 30 minutes after the vomiting reaction.[23] Instead, patients should be advised to rinse with water, or water with dissolved bicarbonate of soda [baking soda] to neutralise the pH in the mouth.[24]

A call to action

The real importance of identifying patients with absorption-related illnesses is to curtail overall systemic damage to the patient's intestinal tract, and therefore their overall health. While oral manifestations related to absorption disorders are often only seen by dental professionals, the impact of collaborative care with physicians and researchers ultimately enhances the quality of life for affected individuals.

Dental hygienists can identify oral manifestations and track changes and outcomes to aid in definitive diagnosis, signifying a call to action for health care professionals to engage in collaborative efforts to support the oral health of patients with absorption-related illnesses.

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