Disease/Medical Condition

CELIAC DISEASE

College of Dental Hygienists of Ontario
Protecting your health and your smile

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(also known as "celiac sprue" and "gluten-sensitive enteropathy")

Is the initiation of non-invasive dental hygiene procedures* contra-indicated? No

- **Is medical consult advised?** No (assuming patient/client is already under medical care for celiac disease and oral and intestinal signs/symptoms are well controlled).

Is the initiation of invasive dental hygiene procedures contra-indicated?** No

- **Is medical consult advised?**..... See above.
- **Is medical clearance required?** ..... No
- **Is antibiotic prophylaxis required?**..... No
- **Is postponing treatment advised?** ..... Possibly, but not typically (depends on severity and level of control of disease, including presence/absence of oral manifestations such as glossitis and aphthous stomatitis, and degree of anemia).

Oral management implications

- Dental hygienists can play an important role in identifying people – especially children with dental enamel defects – who may have unrecognized celiac disease. In suspected cases, the patient/client should be advised to see a primary care physician for possible serologic screening for celiac disease. A patient/client suspected of having celiac disease should not adopt a gluten-free diet without confirmation of the diagnosis. (Confirmatory biopsy of the small intestine by a gastroenterologist – should blood test be positive – requires exposure to gluten.)
- Appropriate medical referral and timely diagnosis can reduce serious complications of this disease. Up to 90% of cases remain undiagnosed, and hence the importance of vigilance by oral heath professionals.
- Early diagnosis is particularly important for children. Children diagnosed with celiac disease before their adult teeth are fully formed (about seven years) can develop healthy tooth enamel if their disease is treated with a gluten-free diet.
- Adherence to a strict gluten-free diet is key to controlling systemic disease, with corresponding improvement of oral manifestations (e.g., aphthous stomatitis and glossitis) other than permanent tooth defects.

Oral manifestations

- Dental enamel defects and recurrent aphthous ulcers commonly occur in clients/patients with celiac disease. These conditions also may be the only manifestations of the disease, occurring in persons without the classic malabsorption syndrome. Therefore, when dental hygienists encounter these features, they should enquire about other clinical symptoms, associated disorders, and family history of celiac disease.
- Tooth defects that result from celiac disease may resemble those caused by fluorosis, early childhood illness, or maternal/childhood tetracycline use. The tooth defects are permanent and do not improve after adopting a gluten-free diet, although cosmetic improvement in older children and adults can be achieved with bonding, veneers, etc.
- Enamel defects resulting from celiac disease involve permanent dentition, and these include tooth discoloration (white, yellow or brown spots), poor enamel formation, pitting or banding of teeth, and mottled or translucent-looking teeth. These imperfections are symmetrical, typically appearing on the incisors and molars.
- Glossitis and atrophy of the papillae of the tongue (i.e., red, smooth, shiny tongue) are associated with celiac-related anemia.
- Dry mouth syndrome is associated with celiac disease.
- Squamous cell carcinoma of the mouth and pharynx may be related to celiac disease.

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Related signs and symptoms

- Celiac disease is a chronic disorder associated with sensitivity to dietary gluten, a protein present in wheat, rye, and barley. When gluten is ingested, autoimmune mediated damage occurs in the mucosa of the small intestine. The resulting atrophy of intestinal villi can lead to malabsorption of protein, fat, and carbohydrates. Over time, the body becomes unable to absorb nutrients such as iron, calcium, folate, and vitamin B_{12}.
- Classic signs and symptoms are abdominal pain, bloating after eating, chronic diarrhea (with large, pale, foul stools), and weight loss. However, many persons present with non-gastrointestinal manifestations, such as anemia, weakness, fatigue, short stature, osteoporosis, menstrual irregularities and infertility. In children, vomiting and/or delayed growth and puberty may occur.
- Canadian prevalence is about 1% of the population, and the disease is more common in Caucasians and persons with a family history of the disease. Other risk factors include Type 1 diabetes, Sjögren's syndrome, and autoimmune thyroid disease.
- While gene mutations seem to increase the risk of developing the disease, other factors are required to trigger it. Celiac disease may be triggered, or appear for the first time, after surgery, pregnancy, childbirth, viral infection or profound emotional trauma.
- Some persons with gluten intolerance develop an intense burning and itching rash, called dermatitis herpetiformis, on the elbows, knees, torso, scalp and buttocks.
- Osteomalacia (i.e., softening of bone), hyposplenism (i.e., reduced functioning of the spleen), headaches, joint pain, nervous system injury (including numbness and tingling in feet and hands), acid reflux, and heartburn are associated with celiac disease.
- There is no cure. Symptoms are managed by adhering to a strict, life-long gluten-free diet.
- Complications of untreated celiac disease include malnutrition, lactose intolerance, infertility, and malignancy (intestinal lymphoma and small intestine cancer).

References and sources of more detailed information

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- OAC Ibsen and J Andersen Phelan. Oral Pathology For The Dental Hygienist (6th edition). St. Louis: Saunders Elsevier; 2014.

* Includes oral hygiene instruction, fitting a mouth guard, taking an impression, etc.

** Ontario Regulation 501/07 made under the *Dental Hygiene Act, 1991*. Invasive dental hygiene procedures are scaling teeth and root planing, including curetting surrounding tissue.

Date: August 25, 2013