

Oral medicine

Gluten enteropathy



Gluten-sensitive enteropathy is more commonly known as celiac disease, is an autoimmune inflammatory disease of the small intestine that is precipitated by the ingestion of food containing gluten¹. Gluten is commonly occurs wheat. There is genetic susceptibility to celiac disease, the strongest genetic factors are the human leukocyte antigen (HLA) class II genes HLA-DQ2 and HLA-DQ8².

The intestinal damage often causes symptoms such as diarrhoea, fatigue, weight loss, bloating or anaemia. It also can lead to serious complications if it is not managed or treated. In children, malabsorption can affect growth and development in addition to gastrointestinal symptoms.

Oral ulceration associated with recurrent aphthous stomatitis (RAS) (Figure 1)—after excluding Behçet's disease or other RAS-like conditions—may be an early indicator of an underlying disorder, especially in young children with failure to thrive.

by **Dr Ajith Polonowita**
University of Otago
Head of Discipline,
Oral Medicine
and **Dr Simon Guan**
University of Otago
Oral Medicine Consultant

GENERAL SIGNS AND SYMPTOMS ³	ORAL MANIFESTATIONS ^{4, 5}
<ul style="list-style-type: none"> ■ Diarrhoea. ■ Fatigue. ■ Weight loss. ■ Bloating and gas. ■ Abdominal pain. ■ Nausea and vomiting. ■ Constipation. ■ Failure to thrive. ■ Unexplained anaemia. ■ Nutritional deficiency ■ Osteoporosis/osteopenia ■ Dermatitis herpetiformis (rare). 	<ul style="list-style-type: none"> ■ Oral ulceration ■ Angular Cheilitis ■ Atrophic glossitis ■ Xerostomia ■ Geographic tongue ■ Glossodynia ■ Delayed tooth eruption ■ White, yellow, or brown spots on teeth ■ Pitting or banding of teeth ■ Mottled or translucent-looking teeth ■ Partial or complete loss of enamel ■ Molar incisor hypomineralization



Diagnosis⁶

- Full blood count and markers of malabsorption (Iron studies, B12, folate, Ca+, clotting profile)
- Genetic testing for human leukocyte antigens (HLA-DQ2 and HLA-DQ8)
- Blood tests- Blood tests (**Patient needs not to have been on gluten free diet**)
 - Ig A endomysial antibody (EMA) /tissue transglutaminase (tTG) antibodies: blood test that looks for antibodies that indicate celiac disease
 - Total serum IgA: A test that checks for IgA deficiency, which can cause a false negative for other tests
 - Deamidated gliadin peptide (DGP) Ig G or IgG EMA/tTG: test that may be used if you have an IgA deficiency or test negative for other antibodies
- Faecal calprotectin will indicate presence of bowel inflammation (7)
- Small bowel biopsy by medical specialist



Figure 1 Major recurrent aphthous stomatitis induced by celiac disease

Management

- Refer for gluten hypersensitivity testing (gastroenterology)
- Oral medicine management of the oral manifestations of celiac disease, such as RAS, angular cheilitis
- Paediatric dentist/general dentist for the management of dental defects

REFERENCES

1. Parzanese I, Qehajaj D, Patrinicola F, Aralica M, Chiriva-Internati M, Stifter S, et al. Celiac disease: From pathophysiology to treatment. *World J Gastrointest Pathophysiol.* 2017;8(2):27-38.
2. Brown NK, Guandalini S, Semrad C, Kupfer SS. A Clinician's Guide to Celiac Disease HLA Genetics. *Am J Gastroenterol.* 2019;114(10):1587-92.
3. Barker JM, Liu E. Celiac disease: pathophysiology, clinical manifestations, and associated autoimmune conditions. *Adv Pediatr.* 2008;55:349-65.
4. Pastore L, Carroccio A, Compilato D, Panzarella V, Serpico R, Lo Muzio L. Oral manifestations of celiac disease. *J Clin Gastroenterol.* 2008;42(3):224-32.
5. Lucchese A, Di Stasio D, De Stefano S, Nardone M, Carinci F. Beyond the Gut: A Systematic Review of Oral Manifestations in Celiac Disease. *J Clin Med.* 2023;12(12).
6. Rubio-Tapia A, Hill ID, Semrad C, Kelly CP, Greer KB, Limketkai BN, et al. American College of Gastroenterology Guidelines Update: Diagnosis and Management of Celiac Disease. *Am J Gastroenterol.* 2023;118(1):59-76.
7. Balamtekin N, Baysoy G, Uslu N, Orhan D, Akçören Z, Özen H, et al. Fecal calprotectin concentration is increased in children with celiac disease: relation with histopathological findings. *Turk J Gastroenterol.* 2012;23(5):503-8.