

Moeller-Hunter glossitis

Kosuke Ishizuka , Kohta Katayama, Yoshiyuki Ohira

Department of General Internal Medicine, St Marianna University School of Medicine, Kawasaki, Kanagawa, Japan

Correspondence to

Kosuke Ishizuka;
e103007c@yokohama-cu.ac.jp

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DESCRIPTION

A woman in her 80s presented to our clinic with anaemia. Her medical history and medications were unremarkable. She had no history of alcohol consumption. She had a balanced diet. Vital signs were normal limits. Her tongue was highly atrophic and appeared red and smooth (figure 1). No neurological findings were observed on examination. Laboratory tests revealed megaloblastic anaemia (haemoglobin level of 83 g/dL and mean corpuscular volume of 110 fL). We suspected vitamin B₁₂ deficiency, which was confirmed based on a vitamin B₁₂ level of <50 pg/mL. Upper gastrointestinal endoscopy revealed *Helicobacter pylori*; therefore, she was diagnosed with vitamin B₁₂ deficiency secondary to atrophic gastritis caused by *H. pylori*. After successful treatment of *H. pylori* and initiation of both intramuscular injection and oral administration of vitamin B₁₂, glossitis and anaemia improved within 1 month (figure 2).

Glossitis in vitamin B₁₂ deficiency is present in up to 25% cases.¹ It is traditionally described as a diffuse and clinically non-specific atrophy of the lingual papillae affecting >50% of the tongue and is classically known as Hunter glossitis or Moeller-Hunter glossitis,² named after the German surgeon Julius Otto Ludwig Moeller (1819–1887) who described the condition in 1851³ and the Scottish physician William Hunter (1861–1937) who described the condition in 1900.⁴ This glossitis has two stages: inflammatory, with bright red plaques,

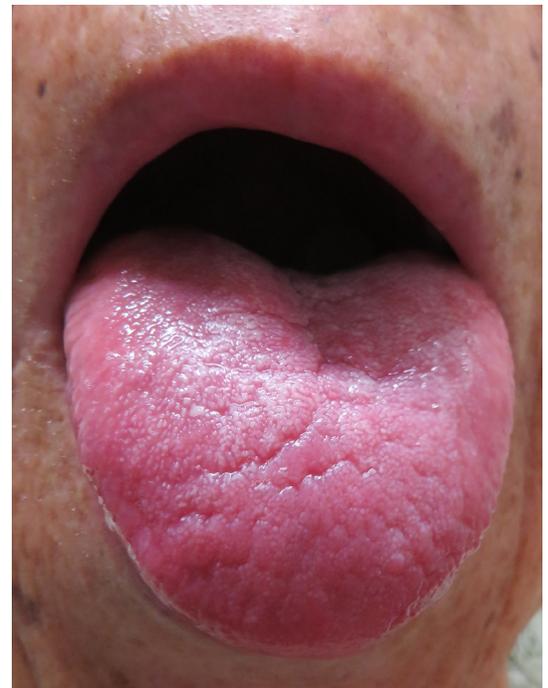


Figure 2 After successful treatment of *Helicobacter pylori* and initiation of both intramuscular injection and oral administration of vitamin B₁₂, glossitis and anaemia improved within 1 month.

followed by atrophic, characterised by papillae atrophy affecting >50% of the tongue.²

The causes of vitamin B₁₂ deficiency include vegetarianism, gastric lesions such as those occurring in pernicious anaemia and atrophic gastritis or after gastrectomy, small intestinal lesions, pancreatic insufficiency and use of certain drugs.⁵ In addition,



Figure 1 Her tongue was highly atrophic and appeared red and smooth.

Learning points

- ▶ Glossitis in vitamin B₁₂ deficiency is present in up to 25% cases. It is traditionally described as a diffuse and clinically non-specific atrophy of the lingual papillae affecting >50% of the tongue and is classically known as Hunter glossitis or Moeller-Hunter glossitis.
- ▶ The causes of vitamin B₁₂ deficiency include vegetarianism, gastric lesions such as those occurring in pernicious anaemia and atrophic gastritis or after gastrectomy, small intestinal lesions, pancreatic insufficiency and use of certain drugs.
- ▶ In addition, *Helicobacter pylori* infection is associated with vitamin B₁₂ deficiency, and eradication of *H. pylori* bacterias normalises serum vitamin B₁₂ levels.



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H. pylori infection is associated with vitamin B₁₂ deficiency, and eradication of *H. pylori* bacterias normalises serum vitamin B₁₂ levels.⁶ Previous study has reported *H. pylori* was detected in 56% of patients with vitamin B₁₂ deficiency, and eradication of *H. pylori* infection successfully improved anaemia and serum vitamin B₁₂ levels in 40% of infected patients.⁶ The treatment of vitamin B₁₂ deficiency includes intramuscular vitamin B₁₂ preparations and high-dose oral vitamin B₁₂.⁵

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Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

ORCID iD

Kosuke Ishizuka <http://orcid.org/0000-0003-4313-6592>

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