

# Gastrointestinal Manifestations of Common Variable Immunodeficiency Diagnosed by Video- and Capsule Endoscopy

The discovery of multiple gastrointestinal polyps during endoscopy indicates the presence of an inherited polyposis syndrome, but this finding can also be associated with noninherited polyposis syndromes, such as nodular lymphoid hyperplasia. Although nodular lymphoid hyperplasia can occur in the absence of immunodeficiency, it can be a manifestation of common variable immunodeficiency. Common variable immunodeficiency is a syndrome which is characterized by immature B lymphocytes that recognize antigens and proliferate in response to an antigen challenge, but which then fail to differentiate to become immunoglobulin-secreting plasma cells [1]. Possible factors suspected of causing this condition include an intrinsic abnormality of B lymphocytes, and dysfunction of T helper cells or of complement components. This abortive differentiation pattern leads to panhypogammaglobulinemia, recurrent sinopulmonary inflammation, splenomegaly, and intestinal lymphoid hyperplasia [2]. Because malignant tumors, such as lymphoma or stomach cancer, can develop in association with common variable immunodeficiency, annual surveillance of these patients is necessary [3]. We present a patient with gastrointestinal manifestations of common variable immunodeficiency.

A 53-old-man, previously misdiagnosed as having Peutz-Jeghers syndrome, presented with chronic diarrhea, weight loss, and recurrent sinopulmonary infections. His laboratory results revealed panhypogammaglobulinemia. Gastroscopy demonstrated multiple polypoid structures, 3–5 mm in diameter, which covered the wall of the duodenum (Figure 1). Histological examination of these structures revealed lymphoid hyperplasia with prominent germinal centers, giardiasis, and inflammation associated with *Helicobacter pylori* infection. Because nodular lymphoid hyperplasia predisposes to the development of lymphomas, capsule endoscopy was performed in order to exclude malignancy. Capsule en-

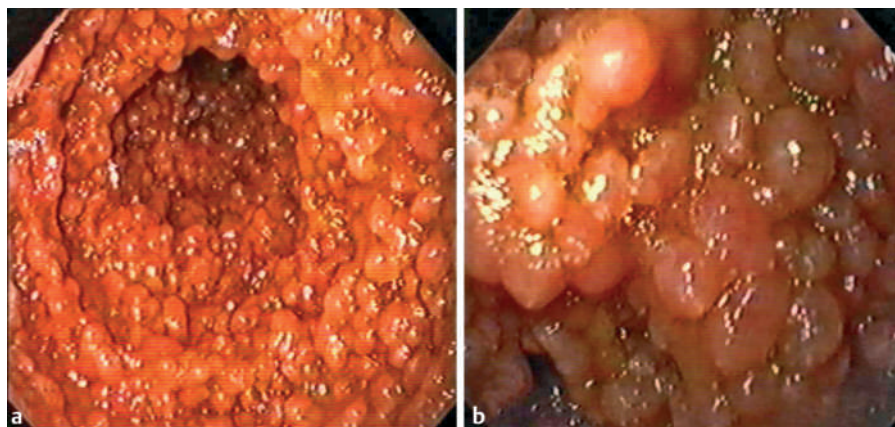


Figure 1 Endoscopic features of intestinal nodular hyperplasia. **a** The view of the duodenal lumen. **b** The polypoid surface of the duodenal wall.

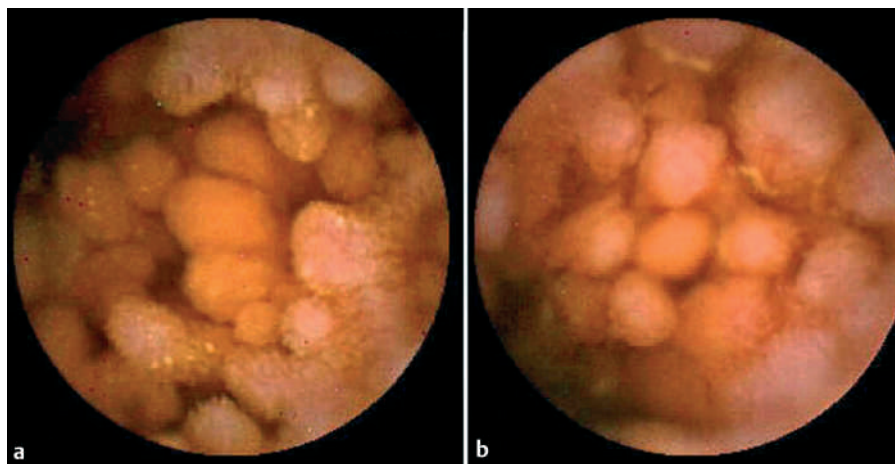


Figure 2 Capsule endoscopy revealed the presence of multiple polyps throughout the small intestine. These images were obtained from the proximal jejunum (**a**) and the terminal ileum (**b**).

doscopy revealed the presence of the polypoid structures throughout the small intestine, and these were particularly numerous in the terminal ileum (Figure 2). No signs of malignancy were seen. A diagnosis of lymphocytic colitis and nodular lymphoid hyperplasia was made in the sigmoid and transverse colon by colonoscopy, though other parts of the colon were unaffected by the syndrome.

In this report we have presented an illustrative case of nodular lymphoid hyperplasia associated with common variable immunodeficiency. We have described the gastrointestinal manifestations of this uncommon disease in a patient with a noninherited polyposis syndrome, diagnosed by video- and capsule endoscopy.

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## References

- <sup>1</sup> Lai Ping So A, Mayer L. Gastrointestinal manifestations of primary immunodeficiency disorders. *Semin Gastrointest Dis* 1997; 5: 10–25
- <sup>2</sup> Di Renzo M, Pasqui AL, Auteri A. Common variable immunodeficiency: a review. *Clin Exp Med* 2004; 3: 211–217
- <sup>3</sup> Mellemkjaer L, Hammarstrom L, Andersen Vet al. Cancer risk among patients with IgA deficiency or common variable immunodeficiency and their relatives: a combined Danish and Swedish study. *Clin Exp Immunol* 2002; 130: 495–500

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