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PHOTO QUIZ

Yellow-white lesions in the upper gastrointestinal tract

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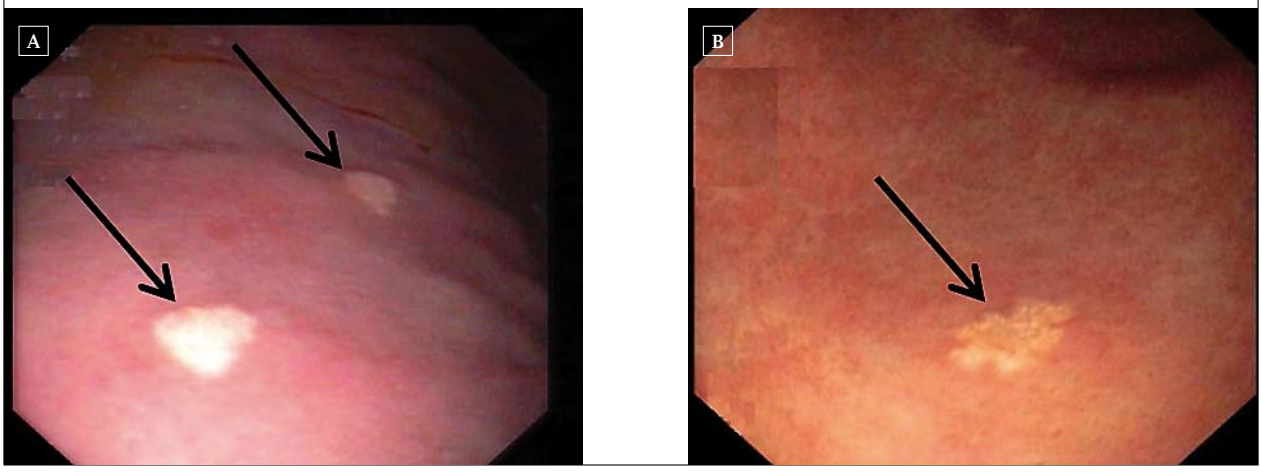
CASE REPORT

We present two patients who were recently referred to our endoscopy department for upper gastrointestinal (GI) tract endoscopy. In both, we found yellow-white lesions in the stomach during endoscopy. Patient A, a 76-year-old Caucasian male, underwent upper GI tract endoscopy in the work-up of iron deficiency anaemia. His medical history revealed a Billroth-I (B-I) gastrectomy because of a peptic ulcer related perforation. In addition, he had hypertension, angina pectoris and hypercholesterolaemia. Endoscopy showed a normal B-I-anastomosis and multiple yellow-white lesions (diameter 3-4 mm) in the corpus and antrum (*figure 1A*). Patient B, a 72-year-old Caucasian male, underwent upper GI endoscopy because of epigastric pain. He was not on any medication; his medical history was compatible with peptic ulceration and he had undergone previous surgery for gastric volvulus. In 1999, B-cell chronic lymphocytic leukaemia was diagnosed, which was managed conservatively. Endoscopy showed a cascade stomach (i.e. a stomach in which the upper posterior wall is pushed forward, creating an upper portion that fills until sufficient volume is present to spill into the antrum) with similar yellow-white lesions as in patient A in the corpus and cardia (*figure 1B*).

WHAT IS YOUR DIAGNOSIS?

See page 361 for the answer to this photo quiz.

Figure 1. *Endoscopic views of the xanthelasmas (arrows) of patient A (panel A) and patient B (panel B)*



DIAGNOSIS

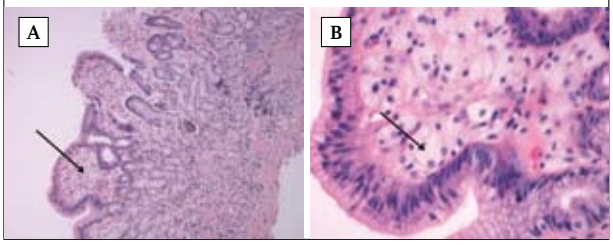
The differential diagnosis at endoscopy included an infectious cause, storage disorders or a rare type of gastric cancer. The histopathological diagnosis of the yellow-white lesions was gastric xanthelasmas. The presence of foamy histiocytes in the lamina propria is the main criterion for the diagnosis (*figure 2*). There were no signs of gastritis or presence of *Helicobacter pylori*.

Xanthelasmas are benign asymptomatic lesions which are incidentally found in the upper GI tract. Gastric xanthelasmas are rare and reported with an incidence of 0.23% within the patients who are subjected to upper GI tract endoscopy.[1] Oesophageal and duodenal xanthelasmas are even more uncommon. In contrast, the prevalence of gastric xanthelasmas in Asia is 7%.[2] Most lesions are described as yellow-white, well-demarcated plaques at endoscopy. The size of the lesions varies from 0.5 to 10 mm in diameter. Although already described by Orth[3] in 1887 as 'lipid-laden macrophages in the gastric mucosa', the aetiology of xanthelasmas still remains unclear. They are likely to be the result of an inflammatory response to mucosal damage, or it may be a consequence of the ageing gastric mucosa.

Xanthelasmas are composed of large foamy cells containing a mixture of lipids, including cholesterol, neutral fat, low-density lipoprotein, and oxidised low-density lipoprotein.[4,5] These cells are mostly histiocytes, although occasionally plasma cells, smooth muscle cells, and Schwann cells participate. In contrast to cutaneous xanthelasmas, there is no evident association between GI xanthelasmas and hyperlipidaemia.[6] It is unknown whether intestinal xanthelasmas are linked to increased cardiovascular risk. Xanthelasmas in the GI tract are benign conditions, but a few case studies have shown early gastric cancer in association with proliferation of xanthoma cells.[7] Furthermore, there is a case description with a clear-cell carcinoid tumour of the stomach, in which the endoscopic and microscopic findings resembled a gastric xanthelasma.[8] Therefore, we recommend that intestinal xanthelasmas are always biopsied in order to achieve an exact histopathological diagnosis. When a patient is diagnosed with upper GI tract xanthelasmas, we do not recommend routine endoscopic follow-up.

In addition, to elucidate the mechanisms of their aetiopathogenesis and to help understand their clinical significance, we would like to invite others to share their experience with gastrointestinal xanthelasmas with us. Therefore please send information about patients and their xanthelasmas to: T.Romkens@MDL.umcn.nl.

Figure 2. *Histopathological picture of an xanthelasma (patient A) with patchy aggregates of foamy histiocytes (arrows), haematoxylin and eosin, x 125 (panel A) and x 600 (panel B)*



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