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Gastric Xanthelasma: A Report of Two Cases with Review of Literature

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Abstract **Background:** Gastric xanthelasmas are rare lesions. The lesions are frequently located in the stomach and less common sites are esophagus, duodenum and the colon. **Case Presentation:** We reported two cases in this study. A 50-year-old man with a past medical history of diabetes mellitus applied with dysphagia and upper gastrointestinal endoscopy revealed a yellow plaque (10×10mm) on the gastric mucosa of cardiac part and during biopsy is easily picked. Histopathological examination of the plaque excluded gastric cancer and revealed numerous large polygonal cells with abundant foamy cytoplasm. A 60-year-old man attended hospital with abdominal pain radiating to the back that there was a 3×2mm yellowish-white plaque in the antrum of the stomach. Histopathological examination of the gastric mucosa in the antrum showed mild chronic gastritis and some H.pylori-like microorganisms. Also, aggregates of foamy macrophages were presented. **Conclusions:** Although the clinical significance of gastric xanthelasmas are unclear, similarities with malignancies and association with premalignant lesions, we need to pay attention to diagnosis of xanthelasmas. A biopsy is mandatory and it is advisable to use histochemical and immunohistochemical methods to confirm the diagnosis of xanthelasmas and eliminate the possibility of gastric malignancy.

Keywords: *gastric xanthelasmas, case report, histopathology*

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1. Introduction

Gastric xanthelasma has been a rarely encountered finding in upper gastrointestinal endoscopy that is characterized by yellowish-white plaque in the stomach especially in the antrum or the pyloric region [1]. The etiopathogenesis for gastric xanthelasmas is also unclear, but chronic gastritis, Helicobacter pylori (H.pylori) infection, diabetes mellitus and hyperlipidemia have been implicated and also xanthelasma is more frequent in women and its incidence increases with age [2]. Its appearance mimics gastric malignancies like signet ring cell carcinoma [3] and carcinoid, a neuroendocrine tumor [4]. Xanthelasma can be treated with acids, laser or primary suture, all presenting frequent relapses besides being inefficacious in extensive cases [5]. In this paper, we reported two patients who one of them attended hospital with dysphagia and another with abdominal pain that was determined xanthelasmas on histologic examination.

2. Case Presentation

2.1. Case 1

A 50-year-old man with a past medical history of diabetes mellitus applied with dysphagia. Physical examination was unremarkable. Upper gastrointestinal endoscopy revealed a yellow plaque (10×10mm) on the gastric mucosa of cardiac part and during biopsy is easily picked. The lesion is suspicious for cancer and glycogenosis therefore biopsy was done and sent to histopathological analysis. Histopathological examination of the plaque excluded gastric cancer and revealed numerous large polygonal cells with abundant foamy cytoplasm (Figure 1). The material has been subsequently stained with histochemical and method of periodic acid–Schiff (PAS). Cytoplasm of these cells was negative for PAS and acid fast staining. The totality of findings led to the diagnosis of xanthelasma.

2.2. Case 2

A 60-year-old man attended hospital with abdominal pain radiating to the back. Physical examination was normal. The results of biochemical examination were within the normal limit. An endoscopic examination was performed. There was a 3×2mm yellowish-white plaque in the antrum of the stomach. Histopathological examination of the gastric mucosa in the antrum showed mild chronic gastritis with lymphoid aggregate formation and some H.pylori-like microorganisms. Sheets of xanthoma cells in lamina propria were presented suggestive for gastric xanthoma (xanthelasma) (Figure 2 and Figure 3).

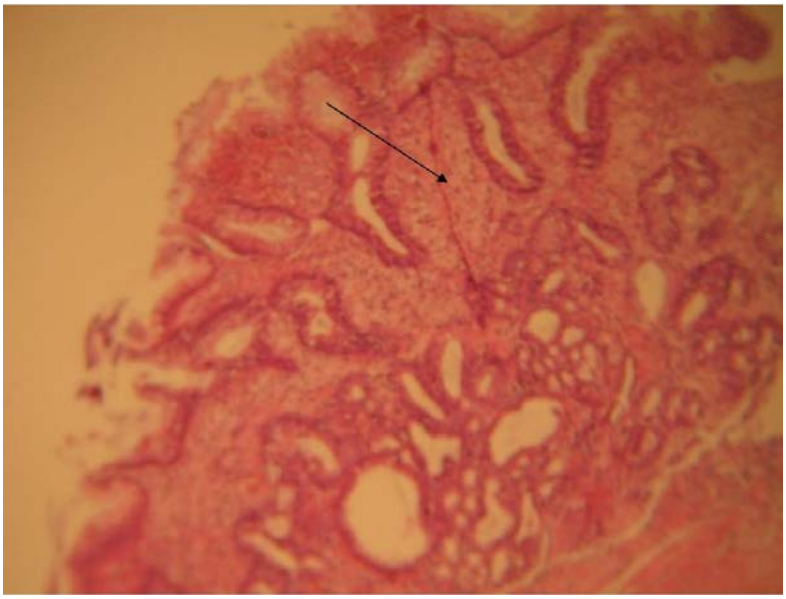

Figure 1. Histopathological picture of a xanthelasma with patchy aggregates of foamy histiocytes (arrow), (H&E, x100)

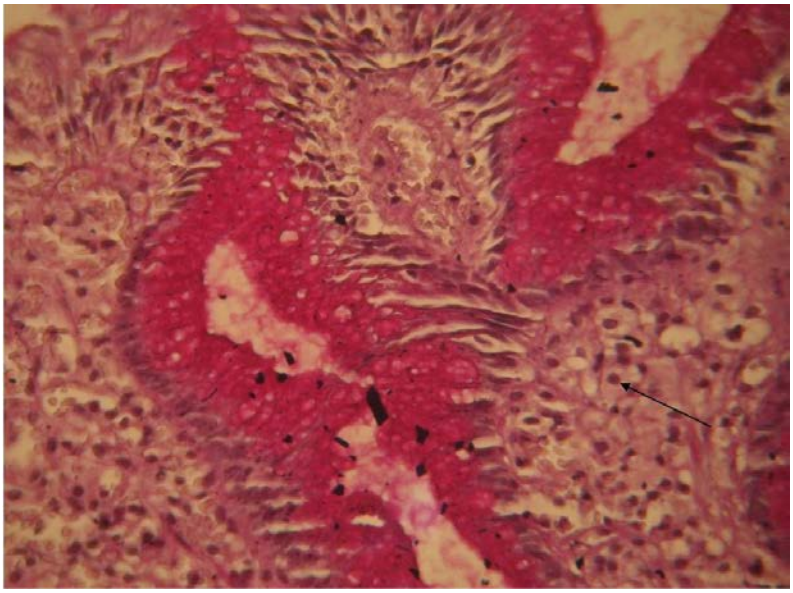

Figure 2. Histopathological picture of a xanthelasma with patchy aggregates of foamy histiocytes (arrow), (H&E, x400)

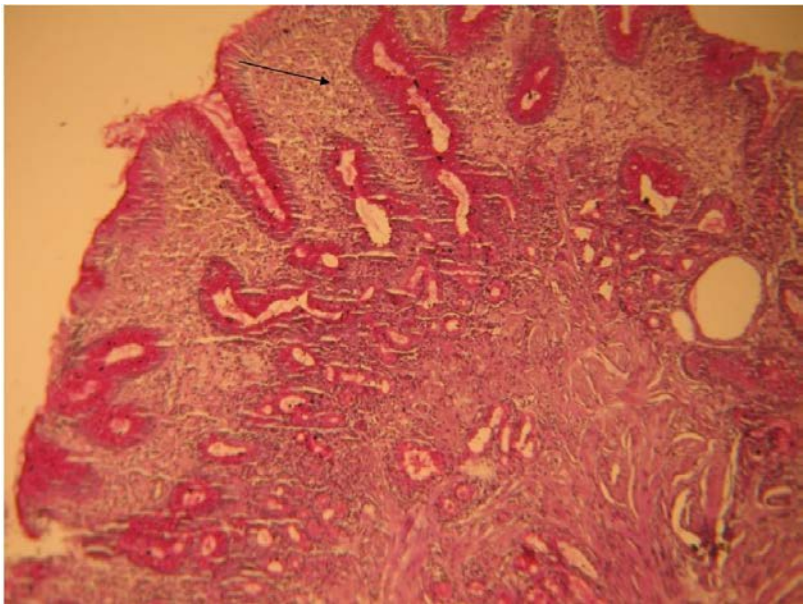

Figure 3. Histopathological picture of a xanthelasma with patchy aggregates of foamy histiocytes (arrow), (H&E, x100)

3. Discussion

Although the etiology and clinical significance of gastric xanthelasmas are still vague, diagnosis of these lesions is important because they may be coexist with malignant lesions [2,6]. The incidence of upper gastrointestinal xanthelasma was reported as 0.23% [6]. The vast majority of lesions, approximately 76% typically occur in the stomach, mostly in the antral region (70%). The lesions are frequently located in the stomach, and less frequently in the esophagus, duodenum and the colon [7]. Most of the reported lesions were located in the antrum and the pylorus, whereas in the present report one of the lesions was in the cardia. The incidence of xanthelasma increases with age (incidence of 53.3% in the age group of 40-60 years) although it can be seen in people of all ages [6]. In our case, the lesion was diagnosed in male patient aged 50 years, another case in an elderly male patient aged 60 years. The endoscopic findings of lesions revealed a yellowish-white plaque, between 0.5 and 10 mm in size and are multiple in 13 to 24% of the cases [8]. In our study, the lesions are single and located in the cardia and antral part of stomach. The lesions have size resemble those reported before. The etiopathogenesis is unclear, although it is believed that the mucosa affected by certain pathological processes is more susceptible to their occurrence [9,10]. The detection of H.pylori antigens in the cytoplasms of xanthelasma cells in some studies led to the hypothesis that these lesions may be initiated by H. pylori infection [11,12] that in one of our cases H.pylori was observed. During the repair of damaged mucosa debris rich in lipid materials is produced, and phagocytosed by tissue macrophages and thus form the foamy cell [2,6,10,13]. The relationship between patient's lipid metabolism and cutaneous xanthelasma is widely reported [6,9]. The correlation between lipid metabolism disorders and gastrointestinal tract xanthelasmas is not obvious [10,13]. The lipid profiles of our two patients were within normal limits. Fasting blood glucose levels of one of the patients was within normal limits and another patient had mild diabetes mellitus controlled by dietary restriction. In our study no etiological agent could be identified in two patients; one patient had mild type 2 diabetes. The morphological features of xanthelasmas can resemble cancer. Muraoka et al. [14] reported on the case of early gastric cancer and xanthelasmas where xanthoma cells and cancerous cells were in contact with each other, cancer cells may have caused xanthoma cell proliferation via an autocrine mechanism.

4. Conclusions

Although the clinical significance of gastric xanthelasmas is unclear, similarities with malignancies and association with premalignant lesions, we need to pay attention to diagnosis of xanthelasmas. A biopsy is mandatory and it is advisable to use histochemical and immunohistochemical methods to confirm the diagnosis of xanthelasmas and eliminate the possibility of gastric malignancy.

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