Xanthelasma of the stomach - A case report

Monalisa Dash[1], Ambarish Padhee[2]

From [1]Registrar, [2]Head and Chief, Department of Pathology, AMRI Hospital, Bhubaneswar, Odisha, India

Correspondence to: Dr. Monalisa Dash, Department of Pathology, AMRI Hospital, Bhubaneswar, Odisha 51030, India. E-mail: monalisha89@gmail.com

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ABSTRACT

Gastric xanthelasmas are very uncommon lesions with incidence varying from 0.2% to 0.8%. The lesions are often located in the stomach and less common sites are the esophagus, duodenum, and the colon. Here, we report the case of a 64-year-old female patient, who was admitted to our hospital with symptoms of dysphagia and upper gastrointestinal tract burning sensation. The upper gastrointestinal tract endoscopy revealed fundal erosion. Histopathological examination of the erosive area excluded gastric cancer and revealed numerous large polygonal cells with abundant foamy cytoplasm, and we came to a diagnosis of gastric xanthelasma. Although the clinical significance of gastric xanthelasma is indistinct, similarities with malignancies and association with premalignant lesions exist, we need to forfeit consideration to a 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.

Key words: *Fundus, Gastric xanthelasmas, Histopathology, Special stain*

Xanthelasmas (xanthomas) are non-neoplastic lesions composed of fat-laden histiocytes commonly seen in the dermis or subcutis. Their occurrence in the stomach is uncommon and can rarely present as gastric polyps mimicking other benign and malignant pathologies [1]. Gastric xanthelasma has been a rarely encountered finding in the upper gastrointestinal tract endoscopy that is characterized by a yellowish-white plaque in the stomach, especially in the antrum or the pyloric region [2]. They can be single or multiple and women are more commonly affected [3]. It can be suspected by the characteristic gross appearance of a yellowish-white plaque or nodule and is confirmed by histological examination [4]. Its appearance mimics gastric malignancies like signet ring cell carcinoma [5] and carcinoid, a neuroendocrine tumor [6]. Histological examination of the biopsied specimen can differentiate these conditions. Its clinical significance and pathogenesis are not clear. Some authors have related it to the aging process of the stomach so the prevalence is expected to increase with increasing age [7], but these are also reported in age group as young as 3 years [8].

CASE REPORT

A 64-year-old Indian, non-diabetic, and non-hypertensive female patient reported in medicine outpatient department for intermittent vague upper abdomen pain for the past 9 months. She also had symptoms such as dysphagia and upper gastrointestinal tract burning sensation. She denied any history of intake of alcohol and is a non-smoker.

Her physical examination was normal including vitals. Hematological and biochemical investigations including blood sugar were normal. Hemoglobin level of 11.2 g/d, white blood cell was 7600 cells/mm^3 and platelet count was 4.2 lakhs/mm^3. Her lipid profile (total cholesterol 181 mg/dL, triglycerides 72 mg/dL, high-density lipoprotein 49 mg/dL, and low-density lipoprotein 73 mg/dL) was also normal. Her upper gastrointestinal tract endoscopy revealed a few types of erosion in the fundus of the stomach (Fig. 1). Body, antrum, and pylorus of the stomach were showing no significant findings. Esophagus and duodenum were also normal on endoscopy.

An endoscopic biopsy was done from the fundus as well as from the surrounding area. The specimen was sent in formalin and different vials for histopathological evaluation. The tissues were processed. After evaluating the hematoxylin and eosin slides, two possibilities were made out, gastric xanthelasma, and less likely signet ring cell carcinoma of the stomach. The microslides revealed multiple foamy macrophages in the widened lamina propria consistent with the diagnosis of gastric xanthelasma in hematoxylin and eosin stain (Fig. 2). Staining of the cytoplasm with periodic acid-Schiff was negative (Fig. 3). *Helicobacter pylori* were not detected in hematoxylin and eosin staining. Biopsy from the surrounding area of the lesion in fundus showed chronic inflammatory changes suggestive of chronic gastritis. The features were compatible with the diagnosis of xanthelasma. No etiological agent could be identified. The patient was advised for regular follow-up, and there was no recurrence or detection of carcinoma in the stomach at the end of the 6-month follow-up period.

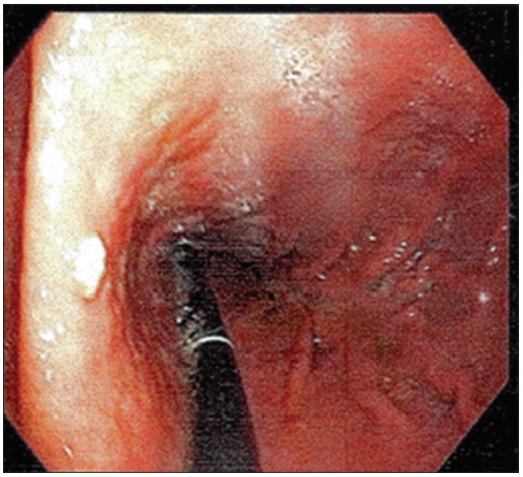

Figure 1: Gastrointestinal endoscopy

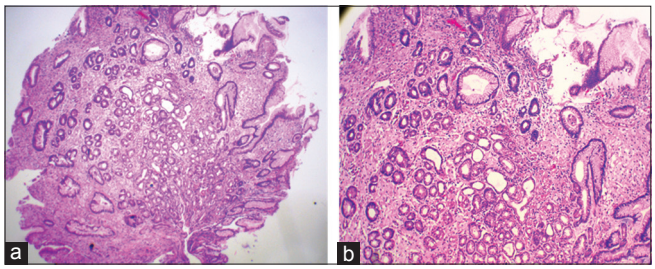

Figure 2: (a) Fundus biopsy showing clusters of xanthoma cells; (b) xanthoma cells

DISCUSSION

Gastric xanthelasma or lipid islands are yellowish-white plaque or nodules with incidence varying from 0.2% to 0.8% [9]. 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 [10].

In a study conducted by Chen *et al*., of 3870 patients who underwent upper gastrointestinal pan endoscopic examinations, 30 (0.8%) were found to have gastric xanthelasma. A moderate predominance of males over females (M: F = 3.3:1) was noted. The age ranged between 21 and 69 years (mean 46.7 years) [4], whereas in the present report, one of the lesions was in the fundus. A study conducted by Gencosmanoglu *et al*. found that 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 [9]. In our case, the lesion was diagnosed in the female patient aged 64 years.

Other precancerous conditions reported with xanthelasma such as atrophic gastritis, gastrointestinal anastomosis, and gastric dysplasia were absent in our patient. Diabetes mellitus and hyperlipidemia can be other coexisting conditions, which were not present in our patient. Infection of *H. pylori* in patients with gastric xanthelasma is described in various studies and is thought to be an etiological factor in the study conducted by Hori and Tsutsumi [11]. This infection was not detected in our patient.

It is contemplated that healing of gastric injury and chronic inflammation leaves behind lipid-laden debris, which is phagocytized by histiocytes resulting in foam cells [8]. These lesions are associated with chronic gastritis, *H. pylori* infection, and intestinal metaplasia and with previous surgery, particularly gastrointestinal anastomosis. All of them are predisposing factors for gastric cancers which mandate endoscopic biopsy and careful follow-up [3]. The natural course of gastric xanthelasma is not clear; it can disappear without any intervention [12]. Most of the times, no treatment is required [13,14], but careful follow-up with endoscopy is needed to see its behavior [15]. In some reports, gastric xanthelasma has been treated with endoscopic mucosal resection in the presence of associated polyps [16].

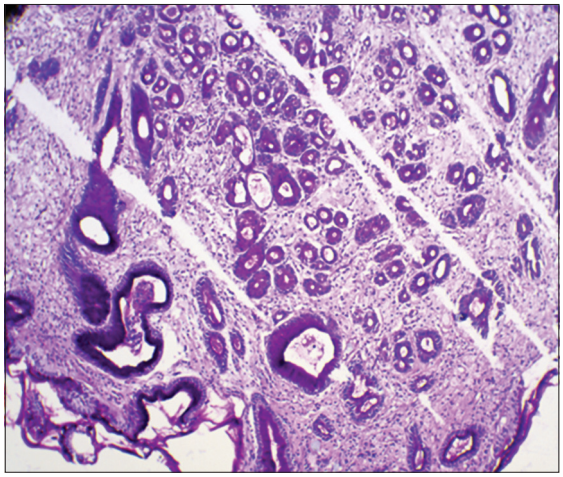

Figure 3: Periodic acid-Schiff stain

CONCLUSION

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

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