these 2 diseases still remains somewhat controversial. This is due to the fact that not all patients with primary hyperparathyroidism will develop pancreatitis. The incidence of acute pancreatitis in patients with primary hyperparathyroidism has been reported to be between 1.5% and 12% only.[1-3] One large retrospective analysis revealed that primary hyperparathyroidism was associated with a 28-fold increased risk of developing pancreatitis as compared to patients without hyperparathyroidism.[4] Examination of the parathyroid and thyroid glands are not part of the routine EUS evaluation. However, a parathyroid tumour may be detected at EUS and this has been described in a case series by Catargi B et al.[5] Typical imaging characteristics of a parathyroid adenoma on ultrasound are a hypo-echoic structure, with regular borders and homogeneous echotexture. Features suggestive of a carcinoma based transcutaneous ultrasound images are an enlarged lesion with irregular borders, and a heterogeneous echotexture. In normal patients, the parathyroids are usually not visualised.

The sensitivity of EUS as compared to transcutaneous ultrasound and scintigraphy scan is inadequately studied. Neither has the learning curve to achieve competency and the inter-operator variability been evaluated. Therefore, EUS cannot substitute existing imaging modalities as a screening tool if a patient is suspected to have a parathyroid adenoma.

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Xanthelasma of the stomach- A rare pseudotumor

Introduction

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).Herein, we report an unusual case of xanthelasma of stomach presenting as gastric polyp and illustrate the clinical, endoscopic and histopathological findings. Moreover, we review the literature in order to clarify the clinical and pathological features of this rare pseudoneoplasm.

Case report

A 57-year-old female presented in the gastroenterology outdoor clinic with chief complaints of abdominal pain, dyspepsia and occasional episodes of nausea and vomiting of six months duration. There was no past history of weight loss, diabetes mellitus or any previous surgery. Her general physical examination was unremarkable. No xanthelasma nodules on skin, eyelids or tendons were seen. Routine hematological investigations and biochemical findings including fasting blood glucose, lipid profile and thyroid function tests were within normal limits. Upper gastrointestinal endoscopy done revealed a small 10 mm x 10 mm polypoidal lesion in the stomach cardia which was removed endoscopically using biopsy forceps. (**Figure 1**).The rest of the stomach, esophagus and duodenum were unremarkable.

Results

Histopathological examination of the lesion revealed dense aggregates of foamy histiocytes widening the lamina propria

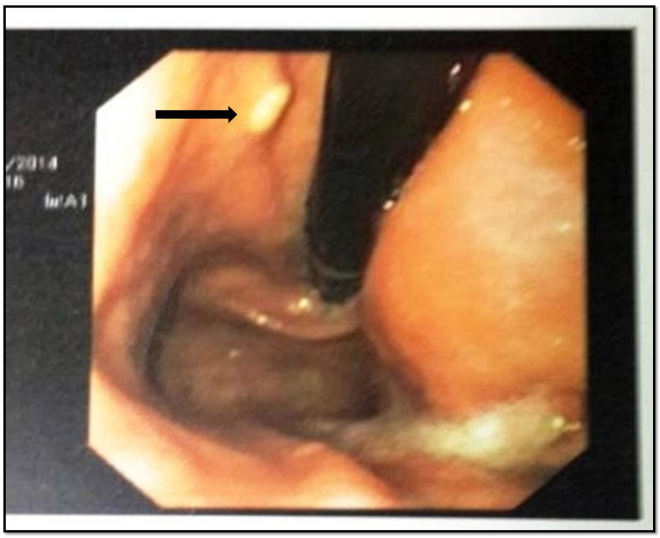

Figure 1: Endoscopy showing a polypoidal lesion in the gastric cardia.

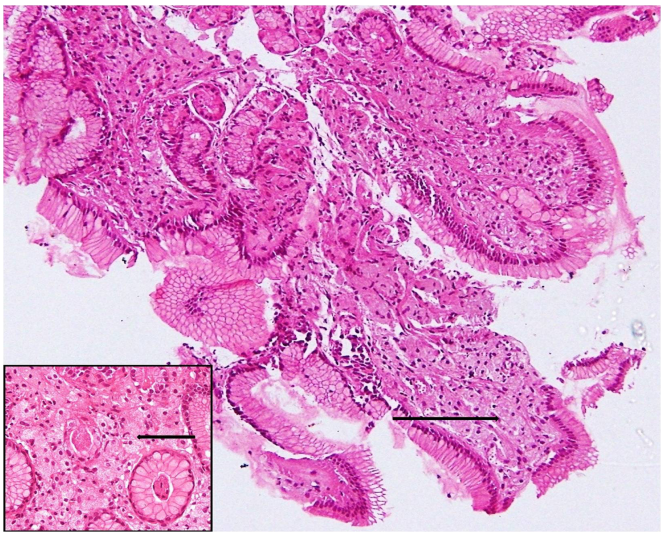

Figure 2: Microscopy of polypoidal lesion showing widening of lamina propria with presence of many clusters of foamy macrophages (H&E 100x). Gastric mucosa is identified on the surface. Inset showing high magnification of foamy macrophages.

(**Figure2**). On immuno-histochemistry (IHC), these cells were positive for CD68 (**Figure 3**) and negative for S-100 and cytokeratin. On special stains they were negative for PAS (periodic acid Schiff). No *H. pylori* or acid fast bacilli were identified and no intestinal metaplasia was seen. The features were compatible with diagnosis of xanthelasma. No etiological agent could be identified. Post polypectomy, there was no recurrence or detection of carcinoma in stomach at the end of the 6-month follow up period.

Discussion

Xanthelasmas or lipid islands are aggregates of large foamy

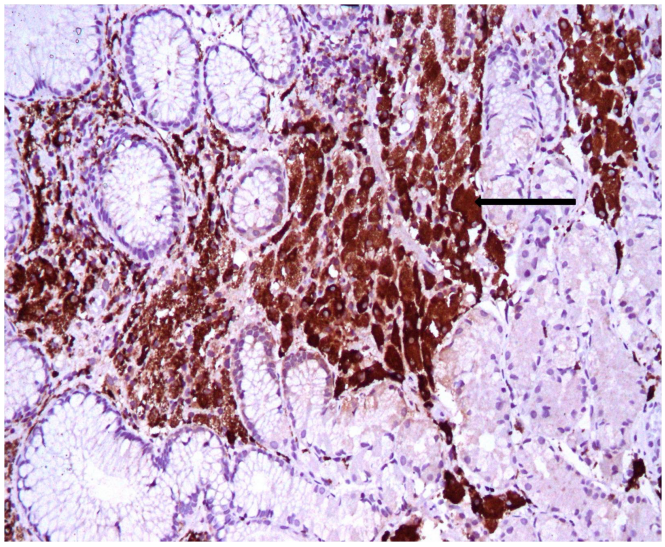

Figure 3: IHC- Foamy macrophages are positive for CD 68 (IHC 400x)

macrophages commonly seen in the dermis, subcutis and sometimes in tendons and synovium. They are known to be commonly associated with hyperlipidemia, diabetes, hypothyroidism, and obstructive liver disease**.** Xanthelasmas of the gastrointestinal tract are however infrequent and are mostly reported in stomach, while, duodenum and colon are rare sites of involvement [(1).] In the stomach their incidence is less than 1% and is found more commonly in the antrum especially in the prepyloric area[(1, 2).] They are more frequent in women and its incidence increases with age[(2)]. The lesions are usually detected incidentally or on autopsy studies for unrelated causes. Clinically, they usually present with vague symptoms of dyspepsia, abdominal pain, nausea and vomiting but these symptoms are not causally related to xanthoma[(3).] Endosopically, they appear as single or rarely multiple, 0.5 mm to 10mm, yellowish white mucosal patches or plaques[(2).] The present case was solitary and located in the cardia. The endoscopic appearances of gastric xanthelasmas may mimic gastric carcinoid tumors or hyperplastic polyp [(2).] Its etiopathogenesis is still not clear but it is postulated to be an inflammatory response to a focal mucosal damage [(4).] It is contemplated that healing of gastric injury and chronic inflammation leaves behind lipid-laden debris, which is phagocytised by histiocytes resulting in foam cells [(3).] These lesions are associated with chronic gastritis, H. pylori infection, intestinal metaplasia and with previous surgery particularly gastrointestinal anastomoses. All of them are predisposing factors for gastric cancers which mandate endoscopic biopsy and careful follow up[(2).] Unlike cutaneous xanthomas gastric ones are not found to be directly related to deranged lipid

Table 1- Differential diagnosis of xanthelasma on histopathology -

Sr No.	Differential diagnosis	CK	S-100 (Cytokeratin)	CD 68	Chromogranin/ synaptophysin	PAS*	ZN‡stain
1.	Xanthelasma	-	-	+	-	-	-
2.	Signet ring carcinoma	+	-	-	-	+	-
3.	Granular cell tumor	-	+	+	-	-	-
4.	Clear cell carcinoid	-	-	-	+	-	-
5.	MAIC†infection	-	-	+	-	-	+
6.	Whipple's disease	-	-	+	-	+	-

(Periodic acid Schiff, ‡ Ziehl Neelsen stain, † Mycobacterium avium intracellulare complex.)*

profile [1, 2]. The histological appearance of xanthomas is characterized by the presence of aggregates of histiocytes which appear as uniform polygonal cells with abundant foamy cytoplasm filling the lamina propria, usually superficially. As they enlarge, they extend deeper into the submucosa. These macrophages are filled with cholesterol or neutral lipids. Histologically, the differential diagnosis includes granular cell tumor, signet ring cell carcinoma, Malacoplakia, Whipple's disease, glycogen storage disorders and mycobacterium avium intracellulare infection (MAIC) [5] (**Table1**).

Xanthomas are considered benign lesionsthat require polypectomy. The clinical significance of gastric xanthelasmas is not completely elucidated. A correlation with gastric cancer has been implicated by some authors [6].A careful examination of the remaining gastric mucosa and follow-up has been suggested. In the present case no correlation with carcinoma could be established. In view of the rarity of this coexistence, it can be argued that this coexistence maybe a incidental rather than a precursor pathology.

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Giant hepatocellular adenoma with peliosis hepatis in a child: A diagnostic dilemma

Introduction

Hepatocellular adenoma is an uncommon tumor of childhood. It often causes great diagnostic difficulty especially in a child with no known metabolic or inherited liver diseases and in multifocal liver lesions. Radiological features can often be misleading and trucut biopsy may not reveal definite diagnosis. We report a case of multifocal giant hepatocellular adenoma where diagnosis was elusive till the lesion was excised and a wide panel of immunohistochemical tests performed. This index case highlights the need to refer such cases to centers where they can be judiciously worked up.