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SCIENTIFIC LETTERS

Granulomatous gastritis induced by onychophagia: First case report

Gastritis granulomatosa inducida por onicofagia: primer relato de caso

Granulomatous gastritis (GG) is a rare entity that is characterized by the presence of granulomas within the gastric mucosa or submucosa.[1] Common causes of GG include disseminated infections (such as tuberculosis, fungal infections), Crohn's disease, underlying malignancies or foreign bodies.[2] When these conditions have been excluded, the diagnosis of idiopathic granulomatous gastritis (IGG) can be made. Nevertheless, most authors have been able to relate gastric granulomas to a particular etiology and the existence of the idiopathic form has been questioned.[3]

A 27-year-old woman was referred to the Gastroenterology outpatient clinic due to post-prandial vomiting for 10 months with associated weight loss (6 kg). Her past medical history was irrelevant and her usual medication was omeprazole 20 mg/day due to occasional symptoms of epigastric pain with years of evolution. An upper endoscopy did not reveal lesions, but multiple biopsies of the gastric mucosa were taken. Gastric biopsies revealed chronic inflammatory process with formation of lymphoid follicles and evidence of *Helicobacter pylori* infection. Additionally, multiple well-defined and non-necrotizing epithelioid granulomas with multinucleated giant cells were found (Fig. 1A and B). In one of the granulomas it was identified a birefringent material compatible with a foreign body (Fig. 1C and D). No acid-fast bacilli (Ziehl–Neelsen stain) or fungal microorganisms (PAS and PAS-D stains) were observed. No additional microbiological studies were performed. A diagnosis of GG, related to a probable foreign material was made.

After a careful clinical history, the patient reported the habit of biting and ingesting nails since childhood. She denied history of onychomycosis, use of nail polish or other nail beauty item lately. The patient had recently begun her

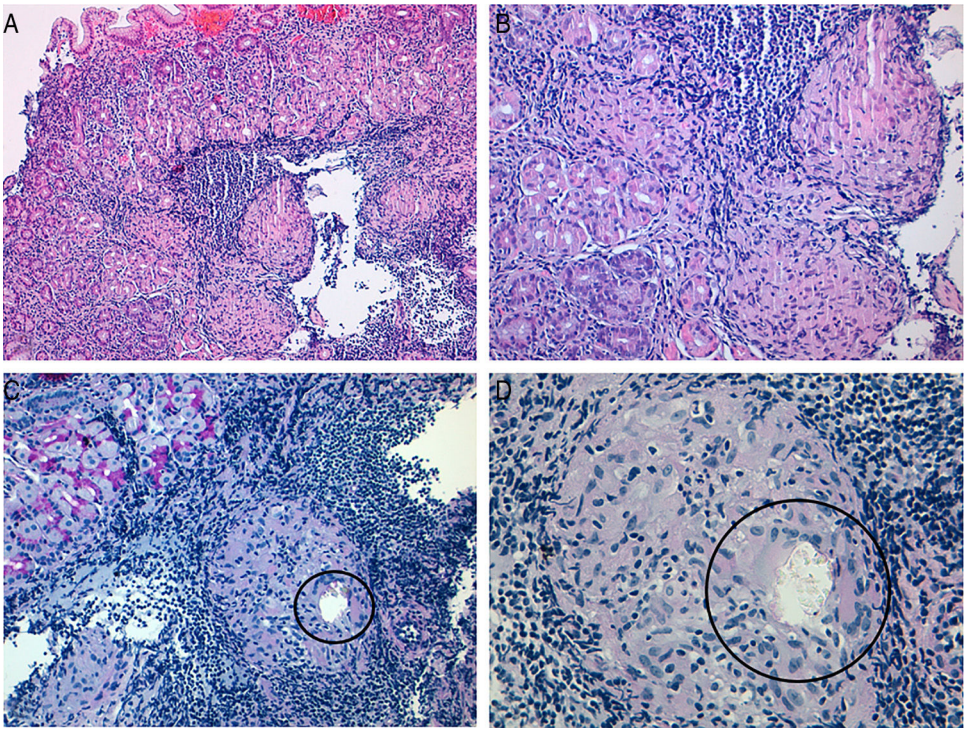

Figure 1 Gastric mucosa with epithelioid granulomas (A – H&E stain, ×100; B – H&E stain, ×200). In the PAS staining a foreign body, highlighted by the circle, was detected in one of the granulomas (C – PAS stain, ×200; D – PAS stain, ×400).

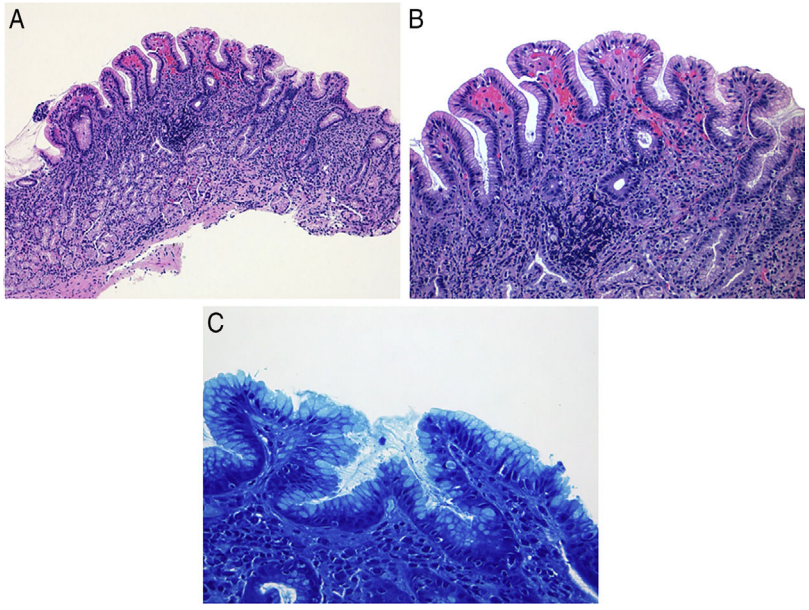

Figure 2 Gastric mucosa with moderate chronic gastritis (A – H&E stain, ×200; B – H&E stain, ×400). *Helicobacter pylori* microorganisms were identified (C – modified Giemsa stain, ×400).

work as a teacher and denied contact with chemicals products in her job or at home. Nevertheless, she underwent a colonoscopy and videocapsule endoscopy that excluded Crohn's disease. She was referred to the Infectious Diseases outpatient clinic and tuberculosis was excluded with chest X-ray, Mantoux test and QUANTIFERON®-TB Gold test.

After six months of avoiding nail ingestion, the patient became asymptomatic. She underwent a subsequent upper endoscopy. Multiple gastric biopsies were undertaken and disclosed moderate chronic *H. pylori* gastritis but no granulomas or foreign material were seen, confirming resolution of GG (Fig. 2A–C).

Granulomatous gastritis is an uncommon pathological finding, with a reported incidence of 0.08–0.35% in the gastric biopsy samples.[4,5] The most common cause of GG in the western countries is Crohn's disease accounting for approximately half of the cases.[4,6] Other more rare causes include gastric tuberculosis, sarcoidosis, parasitic infections, foreign body reactions, Whipple's disease and adenocarcinoma.[7] Miyamoto et al. also described a possible association with *H. pylori* infection with two reported cases of granulomatous gastritis resolution after successful eradication therapy for *H. pylori*.[8] Nevertheless there is still controversy in relation to the role of *H. pylori* as a causative factor in GG, with larger studies unable to conclusively associate *H. pylori* infection with granuloma formation.[4,9] In our case, since the patient presented with disabling symptoms and weight loss our priority was to exclude Crohn's disease and tuberculosis. The presence of foreign material in the biopsies, granulomatous gastritis and habit of nail ingestion suggested this association. Since the role of *H. pylori* in the development of GG is still controversial, we decided not to eradicate *H. pylori* and evaluate the clinical and histological response to suspension of nail ingestion. In our patient, it is likely that the symptoms of epigastric pain with years of evolution may be related to the habit of nails ingestion. The continuous exposure of the gastric mucosa to a foreign body material probably lead to the development of a granulomatous process with subsequent symptomatic aggravation. Given that the patient became asymptomatic and there was an evident histological improvement, we can conclude that nails ingestion (onychophagia) was the cause of GG in this case.

Conflicts of interest

No conflicts of interest to declare.

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Psoriasiform lesions: Uncommon presentation of glucagonoma☆

Lesiones psoriasiformes: forma infrecuente de presentación de glucagonoma

Glucagonoma is a rare tumour of the alpha cells of the islets of both the body and tail of the pancreas. Approximately 70% are associated with glucagonoma syndrome, characterised by the development of necrolytic migratory erythema (NME), diabetes mellitus, weight loss, anaemia, diarrhoea, neuropsychiatric disorders and thromboembolic phenomena.[1] NME is a rare skin condition, involving erythematous, pruritic, painful papules in the perineum and intertriginous areas. The papules group together forming plaques around a central blister. In 90% of cases, NME is associated with a glucagonoma.[2] The skin lesions can sometimes adopt a psoriasiform appearance, and the differential diagnosis between psoriasis and NME should be made in the case of widespread psoriasis which does not improve with sustained treatment.

We present the case of a 52-year-old male investigated by dermatology for skin lesions. He was diagnosed with psoriasis vulgaris, but over the course of three years on treatment, without showing any improvement, he developed new lesions consisting of erythematous, erosive-crusted plaques on his lower limbs (particularly below the knees). A skin biopsy was requested as NME was suspected. The analysis showed psoriasiform dermatitis with compact parakeratosis and morphologically consistent subcorneal pustules and the patient was diagnosed with early-stage NME (Figs. 1 and 2). An abdominal CT scan was performed, finding a 3.2-cm mass in the body of the pancreas with lymphadenopathy in the coeliac trunk of a significant size and multiple liver metastases affecting both lobes. Blood tests showed normal blood glucose, haemoglobin 12.3 g/dl (13.5–17.5), haematocrit 36% (41–53%), lutropin 12.5 mIU/ml (1.5–9.3), follitropin 5.9 mIU/ml (1.5–12.4), cortisol 14.3 μg/dl (6.2–19.4), somatotropin 1.3 ng/ml (<10.0), adrenocorticotropic hormone 87.8 pg/ml (<46.0), enolase 29 ng/ml (<16.0), beta-hCG 69 mIU/ml (<3.0) and carcinoembryonic antigen 1.4 ng/ml (<5.0). Investigations were completed with OctreoScan® (Fig. 3), which showed a large mass in the body of the pancreas measuring approximately 3 cm, compatible with a glucagonoma, in addition to numerous areas of abnormal uptake of tracer in both lobes of the liver. Glucagonoma was diagnosed, which we decided to treat surgically, performing distal pancreatectomy with lymphadenectomy. The pathology report concluded that it was a well-differentiated G1 neuroendocrine tumour, compatible with glucagonoma of the body of pancreas, pT3 pN1. After surgery, the patient made good progress and, two weeks after the intervention, the skin lesions had completely disappeared (Fig. 4). The patient is currently on treatment with lanreotide and is awaiting assessment for liver transplantation.

Pancreatic neuroendocrine tumours, of which glucagonoma represents 4%, account for 2% of all gastrointestinal tumours.[3] Glucagonoma is more common in females aged over 45. Approximately 50% of the patients diagnosed with these tumours develop clinical signs and symptoms related to the biological activity of the hormones secreted by the cancer. In patients with glucagonoma, 70–80% have the following triad: diabetes, NME and anaemia.

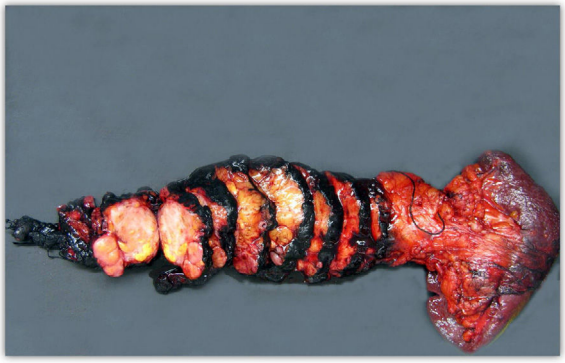

Figure 1 Distal resection of pancreas and splenectomy. A firm whitish lesion with yellowish areas measuring 4.7 cm can be seen in the body of the pancreas.

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