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Gastritis cystica profunda mimicking a GIST – A diagnostic challenge

Gastritis cystica profunda simulando GIST – un caso de desafío diagnóstico

Gastritis cystica profunda (GCP) is a rare hyperplastic lesion with unclear pathogenesis histologically characterized by the presence of gastric glands in the submucosa and even muscularis propria of the stomach with normal overlying mucosa.[1,2] There are two histological patterns of gastritis cystica poliposa: gastritis cystica superficialis, in which cystic glands are limited to the mucosal layer; and GCP in which the cystic lesion locates within the submucosa and muscularis propria.[3] Clinical manifestations of GCP are variable and can include gastrointestinal bleeding, epigastric pain and weight loss.[1] An unspecified mucosal insult or injury is widely accepted as etiological mechanism but the pathophysiology is unknown.[1–4] We present a case of acute gastrointestinal bleeding caused by gastritis cystica profunda mimicking a gastrointestinal stromal tumor in a patient without previous gastric surgery.

A 67 year-old man was admitted for melena during 4 days associated with syncope. He had a previous history of atrial fibrillation and was medicated with warfarin. At admission, he was hemodynamically stable and had no abdominal pain. Laboratory tests revealed normocytic anemia with hemoglobin 8.8 g/dl (previous value: 13.5 g/dl) and an INR of 2.3. Upper gastrointestinal endoscopy (UGIE) revealed a 40 mm polypoid lesion in the gastric body with normal mucosa surface and a central 15 mm ulcerated bleeding as which was very suggestive of a gastrointestinal stromal tumor (GIST) (Fig. 1). There were no esophageal or duodenal visible bleeding lesions. Biopsies performed during UGIE revealed aspects of chronic active gastritis and *Helicobacter pylori* was identified. Upper endoscopic ultrasonography (EUS) showed 40 mm submucosal a hypoechogenic and heterogeneous mass with cystic areas and no perilesional adenopathies. The EUS findings could also correspond to a GIST. EUS guided fine-needle aspiration (FNA) using 19 gauge needle was preformed but the sample was insufficient for evaluation. A full body computed tomography was performed and revealed a 4 × 6 cm gastric intraluminal lesion without signs of invasion or metastatic disease. The diagnosis of a gastric GIST was assumed and the patient was proposed to surgical resection of the lesion. Macroscopically, a polypoid lesion with a nodular surface and a central ulcer was observed, with multiple cysts and solid areas on cross-section (Fig. 2). Histologically (Fig. 2), the gastric mucosa showed focal lesions of chronic atrophic gastritis with activity, hemorrhage and ulceration, the submucosa and muscular propria displayed an abundant cystically dilated pyloric-type and foveolar-type glandular proliferation, without mitoses or atypia; surrounding the glands there was a thin layer of lamina propria and fibromuscular hyperplasia. The diagnosis of Gastritis cystica profunda was made. Surgical margins were free of lesion.

In the majority of reported cases, GCP occurs in patients with a history of gastric surgery, in particular Billroth II procedure.[2,3] It is unclear if it is secondary to chronic inflammation as consequence of duodenal reflux, foreign body reaction or ischemic injury as a result of the surgery.[1,2,5,6] Nevertheless, the interruption of the muscularis mucosae appears to allow migration of epithelial cells into the submucosal layer and subsequent cystic dilation.[2,7] In the unoperated stomach, the cause may be congenital in origin in patients with no prior gastric ulceration or trauma history.[3] It is more common in men and most frequently develops in the gastric body,[3] as seen in this case. Our patient had a history of chronic atrophic gastritis with *H. pylori* infection which in this case can be considered as a possible etiological factor. The presentation symptoms are not specific and, endoscopically it is impossible to

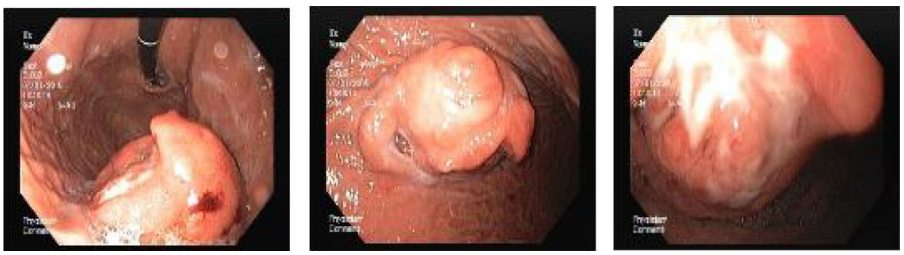

Figure 1 Upper gastrointestinal endoscopy showing a 40 mm polypoid lesion in the gastric body with normal mucosa surface and a central 15 mm ulcerated bleeding suggestive of a gastrointestinal stromal tumor.

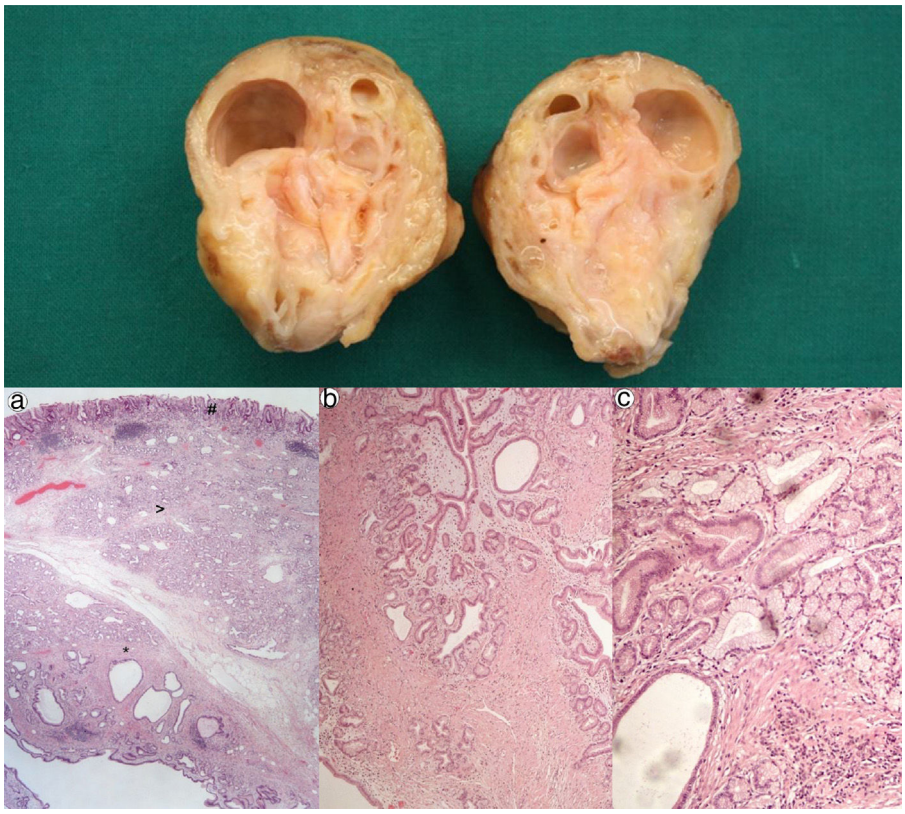

Figure 2 Cross-section shows multiple cysts with diameters between 0.2 and 1.5 cm, filled with transparent and mucinous-looking liquid. (a) (H&E ×20): gastric wall including mucosa (#), submucosa (>) and muscularis propria (*) with abundant cystic glandular proliferation; (b) (H&E ×40): surrounding the glands there is a thin layer of lamina propria and fibromuscular hyperplasia; (c) (H&E ×100): the glands are lined by pyloric-type and foveolar-type epithelium, without mitoses or atypia.

differentiate from other entities like polyps or GIST.[2] As biopsy samples are restricted to the spared mucosal the results are often not diagnostic.[3,8] CT can show a heterogeneously iso- to hypoattenuating intraluminal lesion with multiple small cysts but the appearance may be similar to GIST.[3,9] On EUS, GCP can appear as a polymorphic, homogeneous cystic mass with a minimal solid component within the gastric mucosae which is also not specific of GCP.[1,3] However, the accuracy of EUS-FNA with immunostaining in preoperative GIST, diagnosis has been reported at 91%–100%.[10] Some patients might have to undergo gastric resection when it is impossible to make a definite diagnosis with radiologic study or endoscopic biopsy, as seen in this case. Case reports have revealed the possibility of a malignant transformation from GCP, even in an unoperated stomach, but the incidence of malignancy in GCP patients remains unknown.[3] Epstein–Barr virus might have a role as a premalignant factor in cancer tissue with GCP.[10] Given the lack of a pathognomonic endoscopic or radiographic appearance of GCP, diagnostic and surveillance guidelines are not available and further studies are required.

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Perianal eccrine hydroadenocarcinoma in the context of fistulising Crohn's disease☆

Hidroadenocarcinoma ecrino perianal en el contexto de una enfermedad de Crohn fistulizante

Adenocarcinoma of the anal canal is a very uncommon neoplasm which accounts for 5% of all anorectal neoplasms and 1.5% of gastrointestinal tumours.[1,2] According to the World Health Organization, there are 3 distinct types. The first originates in the transitional mucosa of the superior canal. The second derives from the anal glands (duct). The third derives from a chronic perianal fistula. Patients with tumours of the anal canal, regardless of their type, present a higher percentage of advanced disease and distant metastasis as well as lower overall survival compared to patients with rectal squamous carcinoma. Given the limited number of cases published, no treatment regimen has been completely confirmed[3,4]; however, most authors advocate for a treatment with neoadjuvant chemotherapy followed by radical surgery.[5] Below we report an extremely rare case of perianal eccrine hydroadenocarcinoma in a patient previously diagnosed with Crohn's disease.

A 42-year-old man had a history of Crohn's disease for the past 20 years, multiple chronic perianal fistulisations and derivative colostomy in 2006. The patient was referred to surgery for biopsy of painful inguinal lymphadenopathy and perianal Tru-Cut biopsy to rule out degeneration of a chronic perianal fistula. The pathology study showed that the architecture of the lymph node had been completely replaced by an atypical cell proliferation of epithelial origin organised in the form of solid nests and adopting a ductal pattern with focal cribiform morphology in other areas. The neoplastic cells were large in size, featuring pleomorphic nuclei with granular chromatin, obvious nucleoli and abundant mitosis. The cytoplasm varied (pale eosinophilic, granular or with a change towards clear-cell). The cell immunophenotype was positive for p53 (80%), CK8, CK19, epithelial membrane antigen (EMA), carcinoembryonic antigen (CEA), CKAE1/AE3 and CAM 5.2 with negative immunoexpression of 34BE12, calretinin, CD30, CD117, vimentin, a-inhibin, CK7, p504S, p63, PSA, CDX2, CK20, CD10 and S100.[6] EMA, CK8, CK19 and CEA are usually present in the eccrine and apocrine glands. The morphology and immunophenotype reported matched the findings of the Tru-Cut biopsy, and a diagnosis was made of lymph node metastasis of hydroadenocarcinoma deriving from perianal eccrine glands.

An extension study was performed through a CT scan of the chest and abdomen, pelvic MRI and a body scan with gallium citrate-67 (Fig. 1). The study with gallium citrate-67 revealed a pathological deposit of activity in the perianal region consistent with an inflammatory/septic condition.

The CT scan showed extensive lymphadenopathy in the internal and external iliac lymph nodes and the bilateral inguinal lymph nodes. Findings of complex perianal disease with multiple fistula tracks and abscessifications were detected. In addition, MRI identified a large heterogeneous mass with an infiltrative appearance involving tissue from the most caudal segment of the rectum, pelvic floor musculature, right gluteus maximus and even the subcutaneous tissue and skin.

With a diagnosis of infiltrative neoplastic impairment of the anal canal (T4) with spread to the lymph nodes, the case was discussed in the multidisciplinary committee. Following a review of the literature, a decision was made to treat with neoadjuvant chemotherapy.[7] A total of 12 cycles with a FOLFOX (folinic acid, fluorouracil and oxaliplatin) regimen and 8 more cycles without oxaliplatin (with 5-fluorouracil) were administered.

The patient was re-evaluated by means of MRI of the abdomen and pelvis. This confirmed tumour progression

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