Pyogenic granuloma of the jejunum; diagnosis and treatment with double-balloon enteroscopy: A case report

Granuloma piógeno de yeyuno. Diagnóstico y tratamiento con enteroscopia doble balón.

Reporte de un caso

The causes of gastrointestinal bleeding of obscure origin (GIBOO) are frequently located in the small bowel, and therefore both capsule endoscopy and double-balloon enteroscopy (DBE) can be used for identifying its etiology.

Pyogenic granuloma (PG) is an inflammatory vascular tumor that typically affects the oral cavity and skin. Digestive system involvement is a rare cause of GIBOO. We present herein a case of PG diagnosed and treated through DBE.

A 71-year-old woman had a past history of type 2 diabetes mellitus (metformin), chronic obstructive pulmonary disease (aerosol bronchodilators), congestive heart disease (hydrochlorothiazide), and coronary disease (isosorbide mononitrate). She sought medical attention for anemia of 8-month progression with no apparent bleeding. She received oral iron treatment with no response and required numerous hospitalizations for blood transfusions.

Upper gastrointestinal video endoscopy and video colonoscopy with intubation of the terminal ileum were normal. Serology for celiac disease was negative, the same as the gynecologic studies. Peripheral blood tests showed microcytic and hypochromic anemia.

References


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Within the context of GIBOO, the decision was made to perform capsule endoscopy to study the small bowel. It had no positive findings and was considered an incomplete study reporting prolonged small bowel transit time.

Given the persistent anemia, lack of response to treatment, and the need for transfusions, the patient was referred to our Service for anterograde DBE.

During the procedure, 250 cm of small bowel were examined and a 15 mm sessile lesion covered with eroded pink mucosa was visualized 150 cm from the angle of Treitz. It was resected with a hot snare (after injection of the base with 1/20000 adrenaline) (fig. 1).

The histology study reported a polypoid formation with an epithelium with an ulcerated surface and edematous stroma with dense mixed inflammatory infiltrate accompanied by numerous neoformation vessels, scant cryptic structures with dense cellular cytoplasm, and nuclei with marked reactive changes. CD34 stain was positive for blood vessels and the diagnosis was intestinal PG. The resection margins were lesion-free (fig. 2).

After 8 months of follow-up, the patient progressed with stable hematocrit and no need for transfusion.

GIBOO is defined as gastrointestinal tract bleeding that persists or recurs with no obvious etiology after the performance of 2 gastrointestinal endoscopies (upper and lower). Capsule endoscopy enables the site of bleeding to be located and thus defines the entrance pathway of the DBE (anterograde or retrograde). DBE is a very effective therapeutic tool in the management of small bowel pathologies. Capsule endoscopy provided no results in our patient and the diagnosis and treatment were established through the anterograde DBE.

PGs, also known as lobular capillary hemangiomata, are benign vascular tumors of the skin and mucosae that rarely involve the digestive system. Their pathophysiology implies mechanical damage. The etiology of GPs of the small bowel is unknown, unlike those located in the oral cavity and esophagus, which are presumed to be associated with damage to the mucosal layer due to foods, Barrett’s esophagus, or gastroesophageal reflux. Endoscopically, they appear as...

**Figure 1** Double-balloon enteroscopy. a) Jejunal lesion 15 mm in diameter, and b) Injection at the base of the lesion.

**Figure 2** Histologic study of the lesion. Hematoxylin and eosin stain x4 (a), x100, (b) and marked with CD34 (c). Capillaries and vascular proliferation marked with dense mixed inflammatory infiltrate.
small, pink polyps, with a wide base and ulcers smaller than 3 cm in diameter. Some of them can bleed.6 The endoscopic
characteristics found in our patient coincided with those
reported in previous studies.

PG can originate in the mucosa or submucosa, appearing
as an infiltrate of inflammatory cells and vascular
proliferation.9

Given that these lesions are a cause of GiBOO and
do not regress spontaneously, they should be treated
deroscopically or through surgery.1-6,9

The anatomopathologic report of our case described a
complete lesion resection, including the arteriovenous anas-
tomosis underlying the PG, which minimizes the recurrence
of lesions associated with partial extractions.

Nagoya et al. reported a case of endoscopic resection in
the ileum with DBE. However, they could not determine
whether the vertical margins of the resection were
negative.9

Nakaya et al. described persistent bleeding after biopcsy
and therefore its performance should be carefully
considered.9

PG of the gastrointestinal tract is a rare condition
and fewer than 30 cases have been published up to the
present.1-10 We believe that endoscopic polypectomy is a
feasible treatment option, but because they are highly vas-
cularized structures, the risk for bleeding at the time of
extraction must be considered and additional measures
deroscopic hemostasis contemplated, such as adrenaline
injection, clipping the base of the lesion, or thermal
methods.

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Conflict of interest

The authors declare that there is no conflict of interest.

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