in patients with CVID. Other gastrointestinal tract disorders include opportunistic infections that would cause chronic diarrhoea and *Helicobacter pylori* infection, associated with a 50-fold increase in the incidence of gastric cancer compared to the general population.[9]

Last of all, gastrointestinal and hepatobiliary manifestations are common in patients with CVID, and we therefore suggest that investigations be guided by the morbidity/mortality they represent.

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Microcytic anemia due to ileocolic anastomotic ulcer☆

Anemia microcítica secundaria a úlcera anastomótica ileocólica

Ileocolic perianastomotic ulcers are a late-onset, uncommon, and probably underdiagnosed complication of ileocaecal resections. They tend to present with diarrhoea, malabsorptive syndrome and occult gastrointestinal bleeding which can lead to chronic iron deficiency anemia.

We present the case of a 22-year-old male, who had been a preterm baby, with a history of right hemicolectomy and ileal resection of 23 cm in the first months of life due to necrotising enterocolitis, referred to the outpatient clinic at the age of 19 for severe iron deficiency anemia refractory to oral iron therapy. Initial analysis showed haemoglobin 10 g/dl, mean corpuscular volume 78.7 fl, cholesterol 76 mg/dl, triglycerides 49 mg/dl, albumin 4.12 g/dl and low ferritin levels of 11 ng/ml. Fibre optic gastroscopy with gastric and duodenal biopsies ruled out coeliac disease and *Helicobacter pylori* infection. After confirming the presence of faecal occult blood, fibre optic colonoscopy was performed, showing ileocolic anastomosis ulceration around the entire circumference. Biopsies were compatible with chronic ischaemia. An abdominal CT scan showed multiple gallstones and postoperative changes at the ileocolic anastomosis level.

Treatment was started with mesalazine, diosmin and glutamine. However, since there was no improvement, with the anemia persisting despite oral and parenteral iron replacement, it was decided to resect the ileocolic anastomosis and perform reanastomosis. The histology findings were compatible with chronic ischaemic ulcer (Fig. 1).

After 18 months of follow-up, the patient remains asymptomatic, with no anemia or iron deficiency.

Figure 1 Resection segment from the ileocolic anastomosis showing circumferential ulceration.

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In childhood, ileocolic anastomosis is mainly performed in cases of necrotising enterocolitis, intussusception or congenital intestinal abnormalities.

None of the proposed aetiological mechanisms (non-steroidal anti-inflammatories, bacterial overgrowth or perianastomotic relative ischaemia processes) have been able to demonstrate a clear relationship with ulcer formation, so the pathogenesis remains uncertain.[1,2]

Perianastomotic ulcers are a rare and late-onset complication of gastrointestinal surgery (often >10 years after surgery) and should be suspected in the presence of persistent iron deficiency anemia due to occult blood loss in faeces.[1–5]

The most common signs and symptoms of complicated ileocolic anastomoses include intestinal obstruction, iron deficiency anemia, abdominal pain, malabsorption and malnutrition, particularly if an extensive ileal resection including the ileocaecal valve or a partial colectomy is performed. In such cases, it may affect the patient's development in terms of weight gain and growth.[2]

Definitive diagnosis can take months or even years due to the latent expression of symptoms. Endoscopic examinations, particularly colonoscopy, are the most useful diagnostic method.

These lesions do not respond well to drug treatment; neither antibiotics nor corticosteroids have been shown to have any effect either in the prevention or treatment of occult blood loss or in epithelial regeneration. Surgical treatment, i.e. resection and reanastomosis is probably the best therapeutic option, although whether or not this is effective in preventing recurrences is unclear. Permanent ileostomy should be restricted to selected cases as it involves a high risk of dehydration and electrolyte imbalance if the remnant is jejunum.[5] Due to the lack of effective treatment, minimally invasive techniques have been developed in recent years, such as the endoscopic injection of immunomodulatory biological compounds. However, experience with these techniques is limited.

In short, although anastomotic ulcers are a rare complication of ileocolic anastomoses, in view of the impact on quality of life and the lack of response to medical treatment, which often means surgical treatment is the only option, it is important that we identify the aetiopathogenic mechanisms involved in order to promote the development of new, less aggressive therapies. We also need to carry out long-term follow-up with the aim of preventing recurrences, as this occurs in over half of all cases.

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