

Helena Ferreira^{a,*}, Teresa São Simão^a, Iris Maia^b, Ana Maia^b, João Castro^c, Belarmino Gonçalves^d, Armando Pinto^b

^a Departamento de Pediatria, Hospital da Senhora da Oliveira, Guimarães, Portugal

^b Departamento de Pediatria, Instituto Português de Oncologia, Porto, Portugal

^c Departamento de Cirurgia Pediátrica, Instituto Português de Oncologia, Porto, Portugal

^d Departamento de Radiologia Intervencionista, Instituto Português de Oncologia, Porto, Portugal

* Corresponding author.

E-mail address: helena-of@hotmail.com (H. Ferreira). 2444-3824/

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Ischemic enteritis with unusual presentation



Enteritis isquémica con presentación inusual

The authors present the case of an 83-year-old woman submitted a month before to a total gastrectomy for gastric adenocarcinoma who admitted to the emergency department with hematemesis. After resuscitation and hemodynamic stabilization an upper endoscopy was performed that showed a regular esophagojejunal anastomosis in healing process; however, in the efferent jejunal loop the mucosa appeared edematous, of purplish appearance, with superficial ulceration and exudate, and friability with spontaneous bleeding (Fig. 1). Biopsies were performed. With the suspicion of ischemic enteritis a CT angiography was performed that revealed a conglomerate of jejunal loops with wall thickening and increased uptake of the mucosa, with tightness and twist of the mesenteric vessels (Fig. 2). The arterial vessels seemed patent, however the mesenteric veins had become globular with aspects suggestive of an ischemic process by venous congestion. The patient then underwent laparotomy where was noted migration/herniation of entero-enteric anastomosis of the "Y-en-Roux" to the supramesocolic floor through the mesocolon, confirming the presence of mesenteric torsion and venous congestion conditioning edema and endoluminal

bleeding. The ischemic segment was resected and new anastomosis were performed. The patient was discharged after 14 days under oral nutrition. Later, histology evaluation confirmed the diagnosis of ischemic enteritis (Fig. 3).

In the literature there are rare cases of ischemic enteritis, particularly non-duodenal ischemia, documented by endoscopy, since most of the cases are diagnosed by imaging, and especially surgery.¹ Ischemic enteritis can be classified as either occlusive or nonocclusive. Embolism and



Figure 2 CT angiography with globular mesenteric veins with aspects suggestive of an ischemic process by venous congestion.



Figure 1 Efferent jejunal loop with edematous and congestive mucosa, friability and purplish appearance, findings suggestive of an ischemic process.

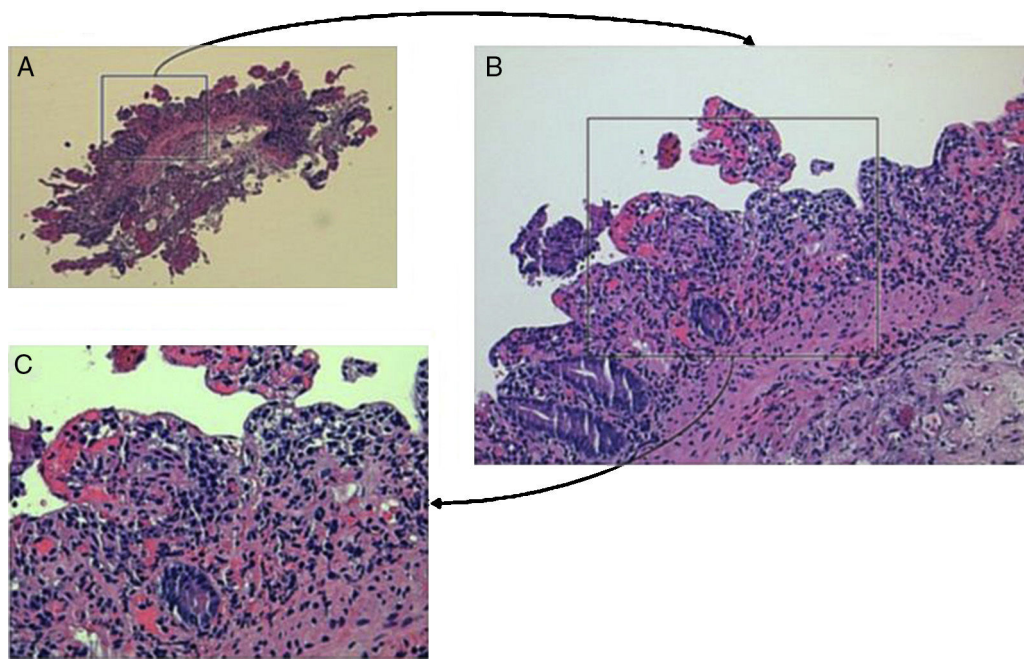


Figure 3 Enteric mucosa with acute inflammation, intestinal villi atrophy, epithelial detachment, and crypt atrophy (HE, A – 40 $\times$; B – 200 $\times$; C – 400 $\times$).

thrombosis of the superior mesenteric artery causes this disease entity in 30% and 25% of all patients, respectively.² Nonocclusive ischemic enteritis occurs in 25% of all patients.² The jejunum is affected in 20% of all patient and the ileum in 45–55% of all patients.² This condition, although infrequent, primarily affects people over 60, especially with diffuse atherosclerotic disease.³ However, cases at earlier ages are described primarily in the context of autoimmune diseases.⁴ Given its high mortality rate, early diagnosis is crucial to the prognosis.⁵ However, because most patient has unspecific symptoms such as pain and abdominal distension, the diagnosis is often delayed. Contrast-enhanced imaging can establish the diagnosis in a significant percentage of cases, however emergent surgery is performed in most cases to diagnosis and possibly treatment.¹ The endoscopic diagnosis is rarely made, except where blood loss is observed, usually hematochezia.⁶ Hematemesis as a form of presentation is extremely rare.⁷ Internal hernia after gastrectomy with Roux-Y reconstruction is likely underreported (5% in a series of 298 patients underwent gastrectomy for cancer with Roux-Y reconstruction).⁸ A high degree of suspicion for internal hernia should be maintained in patients presenting with emesis or abdominal pain after gastrectomy with Roux-Y reconstruction, especially after laparoscopic or total gastrectomy. Closure of mesenteric defects after laparoscopic and total gastrectomy should be considered when technically feasible. In our case due to surgical foregoing, the presence of an esophageal-jejunal anastomosis facilitated due to the presence of hematemesis proximal

paresis of secondary loops to ischemia. In this case the endoscopic findings suggestive of ischemia allowed the rapid treatment of the patient, improving their prognosis. To our knowledge this is the first case described in the context of total gastrectomy for gastric carcinoma (Fig. 3).

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Armando Peixoto^{a,*}, Regina Gonçalves^a, David Paiva^b,
Guilherme Macedo^a

^a Gastroenterology Department, Centro Hospitalar de São João, Oporto WGO Training Center, Porto Medical School, University of Porto, Alameda Prof. Hernâni Monteiro, 4200-319, Porto, Portugal

^b Pathology Department, Centro Hospitalar de São João, Oporto WGO Training Center, Porto Medical School, University of Porto, Alameda Prof. Hernâni Monteiro, 4200-319, Porto, Portugal

* Corresponding author.

E-mail address: armandoafp5@gmail.com (A. Peixoto).
2444-3824/

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Omeprazole-induced hallucinations. Not as rare as you might think[☆]



Alucinaciones por omeprazol. No tan raras como se cree

In an attempt to find information on a rare adverse reaction associated with omeprazole use, the onset of auditory hallucinations, I consulted a magnificent review published recently in *Gastroenterology* on potential risks associated with long-term use of proton pump inhibitors (PPIs),¹ but did not find any relevant information. I did not manage to find anything in another recent review in Spanish either.² I continued searching on PubMed and finally found a few references to hallucinations associated with omeprazole use.^{3–5} It therefore seems that this is an uncommon adverse reaction, reported very rarely in literature, especially in Spanish.

Omeprazole, which has been marketed since 1989, is a safe and effective drug with few side effects, the most common of which appears to be diarrhoea, followed by nausea/vomiting, abdominal pain and headache.⁶ In rare cases, acute psychotic symptoms, in the form of delirium⁷ and visual^{3,4} and auditory⁵ perception disturbances (i.e. hallucinations), may appear. In all published cases, illusions or hallucinations have appeared in elderly patients, aged between 77 and 92.^{3–5}

The case in question is that of a 36-year-old male patient with a history of hiatus hernia and peptic oesophagitis and no history of psychiatric disorders or hearing problems. He was experiencing symptoms of gastro-oesophageal reflux disease (GORD) and was therefore prescribed 40 mg omeprazole/day. Within 48 h of commencing treatment, the patient reported experiencing auditory hallucinations in the form of insults and malicious phrases from his wife and closest friends, with whom he got angry and showed strange, aggressive behaviour. The hallucinations appeared intermittently and the patient continued with this treatment for about 6 weeks, after which time he discontinued therapy after suspecting that this was an adverse effect. Within 4 days,

all hallucinations disappeared completely. As an alternative therapy, he was prescribed esomeprazole, which provided very good control of his reflux symptoms with no new hallucinations to date.

Apparently, besides the adverse effect itself, the case is considered rare because of the patient's young age at which hallucinations appeared, compared to other reports, and the duration of the adverse effect, which lasted until the patient stopped taking omeprazole.

However, things were not as they seemed. Having contacted a well-known medical editor, Dr Marta Pulido, who I would like to thank for her help and insight, she recommended that I consult the on-line tool eHealthMe.com (<http://www.ehealthme.com>), which can be used to check the adverse reactions of more than 45,000 drugs and supplements reported by patients experiencing such effects to the US Food and Drug Administration (FDA) since 1977.

On checking this source of information,⁸ up until 4 May 2017, 168,361 patients had reported having had a side effect when taking omeprazole, with 981 (0.58%) of these being hallucinations and 0.09% auditory (appearing most commonly during the first month of treatment [49.12%] and at the age of 60 or older [61.09%]).

According to this same source, the most common side effects associated with omeprazole use were: 10,097 cases of nausea, 7968 cases of fatigue, 9131 cases of difficulty breathing, 9089 cases of diarrhoea, 7968 cases of weakness, 7322 cases of nausea and vomiting, 7196 cases of pain, 7107 cases of dizziness and 6633 cases of fever. In fact, hallucinations associated with other PPIs, including esomeprazole magnesium (0.48% with 0.05% auditory hallucinations), appeared with a similar frequency, with lansoprazole appearing to be associated with the highest number of cases of hallucinations (0.71% with 0.15% auditory hallucinations).

In addition to the above, the aforementioned online FDA application allows us to check interactions reported between different drugs and the diseases associated with such interactions over time. For example, a few years ago, interactions were reported between omeprazole and the anti-platelet effect of clopidogrel (which is reduced), with the resulting risk of coronary heart disease and myocardial infarction.⁹ According to this source, up until 26 April 2017, 2765 patients who were taking both drugs reported some kind of side effect, with 119 (4.78%) reporting myocardial infarction and 65 (2.61%) reporting gastrointestinal bleeding, both within the first month of treatment.

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