



# Pyogenic granuloma after embolization of a duodenal arteriovenous malformation in a patient with bleeding of obscure origin

Leticia Rosevics, Bruna Streppel Fossati, Elisandre Caroline dos Santos Cerutti, Fernanda Bizinelli de Camargo  
*Clinical Unit-Gastroenterology and Digestive Endoscopy Unit, Hospital de Clínicas da Universidade Federal do Paraná-EBSERH, Curitiba, Brazil*

**Question:** A 45-year-old male patient with a metallic aortic valve prosthesis due to coronary sinus dissection underwent follow-up endoscopies and colonoscopies for refractory iron deficiency anemia. Enterotomography showed a suspected vascular malformation in the proximal jejunum, 10 cm after the Treitz angle. On jejunoscopy, the malformation was represented by a flat, reddish vascular lesion, with neovessels on the surface, measuring 20 mm and occupying about a third of the circumference of this segment (Fig. A). A metallic clip was placed to perform arteriography, which revealed active bleeding; successful embolization was performed (Fig. B). One year later, the patient presented again with iron deficiency anemia. On enterotomography a hypervascular nodular lesion was identified in the same topography as before, with a large feeding vessel (first jejunal branch) measuring 19 × 15 mm; this was confirmed at jejunoscopy by a polypoid lesion, with a reddish surface and covered by fibrin. Its base could not be evaluated (Fig. C). The patient underwent enterectomy, and histology revealed an intense endothelial proliferative process in a slightly lobular pattern (Fig. D). Written informed consent was obtained. Based on the above information, what is the most likely diagnosis?

## Answer to the Images: Pyogenic Granuloma

The patient underwent surgery for pyogenic granuloma at the original site of the embolization. No further episodes of anemia occurred during the follow-up. Pyogenic granulomas are lobular capillary hemangiomas, usually found on the skin and oral mucosa, and are rare in the gastrointestinal tract, especially in the small intestine.<sup>1-3</sup> Its etiology is theorized to be in response to trauma or chronic irritation, such as infection.<sup>2</sup> On endoscopy, pyogenic granuloma shows as a polypoid lesion with a reddish surface, and is an uncommon diagnosis in patients with digestive hemorrhage of obscure origin or chronic anemia.<sup>1-5</sup> Its treatment can be endoscopic or surgical resection. In the gastrointestinal tract, mucosal damage and exposure to gastric acid are reportedly a cause of pyogenic granuloma, and although there are some case reports in the small intestine, to the best of our knowledge, there are no reports on its appearance after embolization of a vascular lesion in the small intestine.<sup>1-5</sup>

## ADDITIONAL INFORMATION

### Funding Source

The authors received no financial support for the research, authorship, and/or publication of this article.

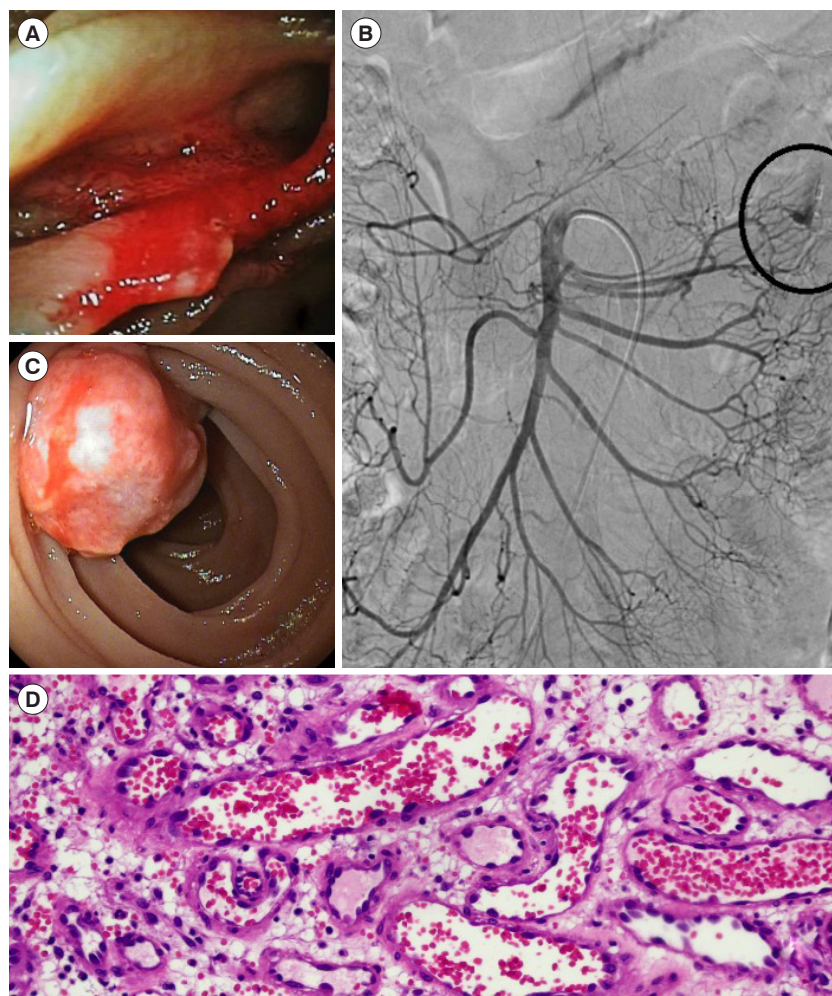
### Conflict of Interest

No potential conflict of interest relevant to this article was reported.

Received August 2, 2023. Revised August 21, 2023.

Accepted August 27, 2023.

Correspondence to Leticia Rosevics, Hospital de Clínicas da Universidade Federal do Paraná-EBSERH, R. General Carneiro, 181, Curitiba 80060-900, Brazil. Tel: +55-41-33601800, E-mail: leticia.rosevics@hc.ufpr.br



### Data Availability Statement

The data underlying this article are available in the article.

### Author Contributions

Conceptualization; Data curation; Formal analysis: Rosevics L, Fossati BS, Cerutti ECS, de Camargo FB. Methodology; Validation; Visualization: Rosevics L, Fossati BS. Project administration; Supervision: Rosevics L. Writing - original draft: Rosevics L, Fossati BS, Cerutti ECS, de Camargo FB. Writing – review & editing: Rosevics L, Fossati BS, Cerutti ECS, de Camargo FB. Approval of final manuscript: all authors.

### ORCID

Rosevics L	<a href="https://orcid.org/0000-0001-7307-1895">https://orcid.org/0000-0001-7307-1895</a>
Fossati BS	<a href="https://orcid.org/0000-0001-9291-7809">https://orcid.org/0000-0001-9291-7809</a>
Cerutti ECS	<a href="https://orcid.org/0009-0006-1693-1661">https://orcid.org/0009-0006-1693-1661</a>
de Camargo FB	<a href="https://orcid.org/0009-0007-1303-3599">https://orcid.org/0009-0007-1303-3599</a>

### REFERENCES

1. Cuadros Martínez M, Fernández Martos R. Pyogenic granuloma of the duodenum as an unusual cause of gastrointestinal bleeding. *Rev Esp Enferm Dig* 2019;111:410-411.
2. Hayashi Y, Hosoe N, Takabayashi K, et al. Clinical and endoscopic characteristics of pyogenic granuloma in the small intestine: a case series with literature review. *Intern Med* 2020; 59:501-505.
3. Castela J, Mão de Ferro S, Ferreira S, Cabrera R, Dias Pereira A. Pyogenic granuloma of the jejunum: an unusual cause of anemia. *J Gastrointest Surg* 2018;22:1795-1796.
4. Korc P, McHenry L. An uncommon cause of chronic upper GI bleeding. *Gastrointest Endosc* 2016;84:524.
5. Ikeoka S, Yoshizaki T, Matsuda T, et al. A rare case of pyogenic granuloma of the jejunum causing gastrointestinal bleeding. *Clin J Gastroenterol* 2020;13:1125-1128.