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**Gastrointestinal bleeding in a pancreatic arteriovenous malformation successfully treated by transarterial embolization**

David Ferreras, David Ruiz de Angulo and Francisco Sánchez Bueno

Department of General and Digestive Diseases Surgery. Hospital Universitario Virgen de la Arrixaca – IMIB. Murcia, Spain

**Correspondence:** David Ferreras Martínez

Correo electrónico: [david\\_99db@hotmail.com](mailto:david_99db@hotmail.com)

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Dear Editor,

Pancreatic arteriovenous malformation (PAVM) is a rare case of upper gastrointestinal bleeding (UGIB) that must be recognized in the clinical practice, as it may be a potentially lethal condition in the case of rupture and hemorrhage. Anatomic alteration is extremely rare and less than one hundred cases are reported in the scientific literature (1).

Herein, we report a case of a 61-year-old patient admitted to our hospital due to upper gastrointestinal bleeding and jaundice. A CT scan and a cholangioMRI showed hemobilia and the presence of PAVM. While in hospital, he presented melena and progressive anemia and therefore, transarterial embolization (TAE) of the PAVM was performed (Fig. 1). This procedure was effective and the patient improved clinically and analytically. He was discharged on the 17<sup>th</sup> day and remains asymptomatic after 2-years of follow up.

Most PAVMs (90 %) are considered primary, i.e. congenital, due to the persistence of the fetal pancreatic vascular network or hereditary, related to Weber-Rendu-Osler

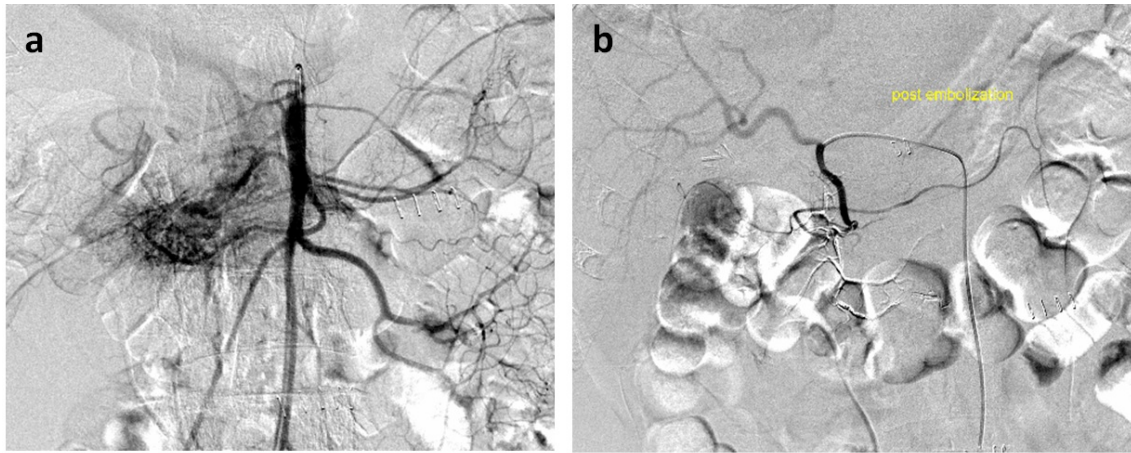
disease. A smaller percentage of cases (10 %) are secondary to a previous process in the pancreas such as trauma, recurrent pancreatitis, neoplasm or pancreatic post-transplant (1,2).

The most frequent symptoms are UGIB and epigastric pain. The main complications are bleeding (50 %), acute pancreatitis (16.9 %), the development of portal hypertension (6.7 %) or a pancreatic pseudocyst (3.4 %) (2). The differential diagnosis includes mainly pancreatitis and hypervascular lesions such as a neuroendocrine tumor, serous cystadenoma, cystadenocarcinoma, angiosarcoma and metastasis, especially metastatic renal cell carcinoma.

Treatment is controversial and pancreatic resection is considered the definitive treatment in symptomatic cases and must be performed early to avoid complications (3). TAE can be successfully performed as a definitive treatment, especially in cases where the nutrient arteries have been defined by means of imaging tests (4).

## REFERENCES

1. Chou S-C, Shyr Y-M, Wang S-E. Pancreatic arteriovenous malformation. *J Gastrointest Surg*. 2013;17(7):1240-6. DOI: 10.1007/s11605-013-2217-2
2. Song KB, Kim SC, Park JB, et al. Surgical outcomes of pancreatic arteriovenous malformation in a single center and review of literature. *Pancreas* 2012;41(3):388-96. DOI: 10.1097/MPA.0b013e31822a25cc
3. Shearer DD, Demos TC, Sichlau MJ. Pancreatic arteriovenous malformation: a case report and literature review. *J Radiol Case Rep* 2011;5(8):8-13.
4. Vidmar J, Omejc M, Dežman R, et al. Thrombosis of pancreatic arteriovenous malformation induced by diagnostic angiography: case report. *BMC Gastroenterol* 2016;16(1):68. DOI: 10.1186/s12876-016-0485-5



**Figura 1. Arteriografía que muestra la MAVP antes (a) y después (b) de la embolización transarterial.**

**Fig. 1. Angiography (A) and transarterial embolization (B) of the PAVM.**

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