

Digestive Hemorrhage Revealed By Gastric Angiodysplasia: About A Case.

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Abstract: A vascular ectasia that belongs to the category of vascular malformations of the digestive tube is called angiodysplasia. It's a rare pathology, but it's becoming more and more linked to digestive hemorrhages. Only a few cases of inhabitability exist in the gastric location. We describe a case of gastric angiodysplasia, collected in the department of visceral surgery A of the Hassan II University Hospital, Fez. The patient presented with diffuse gastric angiodysplasias, whose endoscopic hemostasis was unfeasible which motivated the realization of an embolization and then a surgical treatment. Hence, this treatment consisted of gastrectomy Gastric angiodysplasia which is challenging to diagnose and especially to treat because of frequent recurrences. Surgical treatment remains a crucial therapeutic recourse in case of important hemorrhage and in case of recurrence after endoscopic treatment as well as in case of extensive lesions.

Keywords: Angiodysplasia, stomach, hemorrhage, gastrectomy.

Introduction:

Gastrointestinal angiodysplasias account for only 2-8% of all cases of gastrointestinal hemorrhage. However, they are a common cause of occult bleeding in the elderly, accounting for about 40% of occult bleeding. [1].

Digestive angiodysplasias are vascular malformations whose pathogenesis is poorly understood. Most of them are of acquired origin, as a consequence of age-related degenerative lesions, isolated or multiple, segmental or diffuse, they most often affect the right colon and the cecum but can occur in the whole digestive tract [2].

These vascular malformations of the gastrointestinal tract were first mentioned in the literature in 1839, and it was in 1974 that the term intestinal angio-dysplasia (IA) was defined as an acquired superficial vascular lesion, single or multiple, developed in the mucosa and/or submucosa of the wall of the gastrointestinal tract, without being associated with a cutaneous or visceral angio-matress lesion [3,4,5].

Their mode of revelation is occult or externalized digestive hemorrhage, sometimes massive and recurrent. Their endoscopic diagnosis is often difficult. Arteriography is the diagnostic method of choice when the hemorrhage is abundant or if endoscopy is non-contributive. [2,5].

Endoscopic treatment, in particular by laser coagulation with argon plasma, is effective if the lesions are few and isolated. In case of failure or in diffuse forms with multiple lesions, as in our case, surgery may be necessary and allow a definitive treatment [2,5].

We report here the case of a gastric angiodysplasia revealed by a digestive hemorrhage collected in the department of CHU Hassan II Fez, as well as a clarification based on a review of the litterature [2].

Observation :

The patient was 15 years old and had no previous pathological history.

He was admitted to the emergency room of our hospital with a digestive hemorrhage: hematemesis and melena of great abundance, which had occurred a few hours earlier.

Clinical examination on admission revealed a patient tachycardia at 110 beats/min with hypotension at 90/50 mmhg, FR at 22 cycles/min and temperature at 37°C.

The abdominal examination was normal except for the TR which objectified the presence of melenas

After initial conditioning:

2VVP + vascular filling + with intravenous injections of proton inhibitors.

SNG, SU

A biological check-up on admission showed an anemia of 3.9 hypochromic microcytic, hence the initial transfusion of 2 packed red blood cells, a correct platelet count of 334,000, a PT of 89%, and normal renal function.

After the stabilization of the patient, an esophagogastroduodenal fibroscopy (FOGD) was realized, which aims the presence subcardially at the level of the greater gastric curvature of a large adherent clot measuring approximately 23 mm, with failure of detachment despite several attempts by serum lavage and diathermy loop with failure of endoscopic treatment.

Abdominal angioscanner (Figure 1) showed a gastric angiodysplasia: all the arterial branches coming from the left gastric artery realizing a malformative network with large mesh, the vascularization of the spleen is shared between the short gastric arteries, branches of the left gastric artery and an epiploic artery, branch of the superior mesenteric artery.

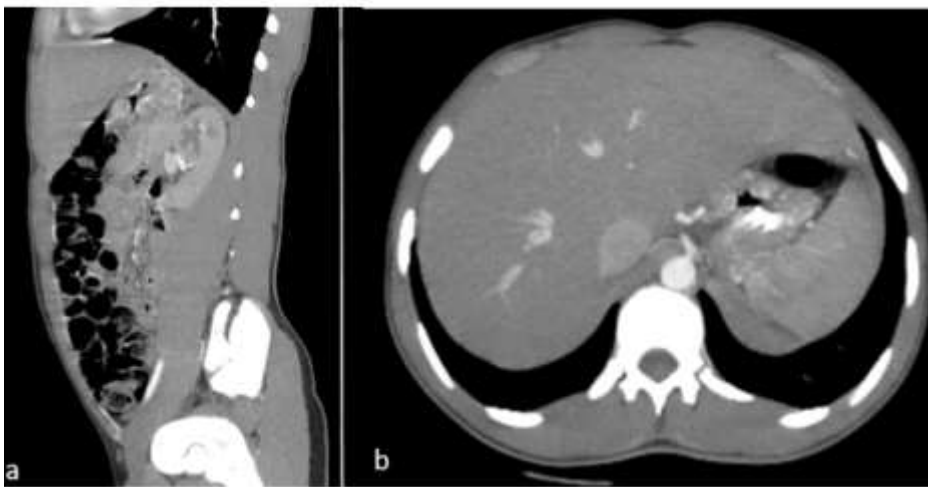


Figure 1: Abdominal angioscan in sagittal (a) and axial (b) sections showing a dilated and sinuous aspect of all the perigastric arterial branches, realizing a malformative network with large meshes and compatible with gastric angiodysplasia.

The therapeutic decision was embolization (Figure 2), while awaiting definitive gastric and splenic surgery, given the high risk of rebleeding in a lightning mode and also the arterial configuration exposing to ischemic complications.

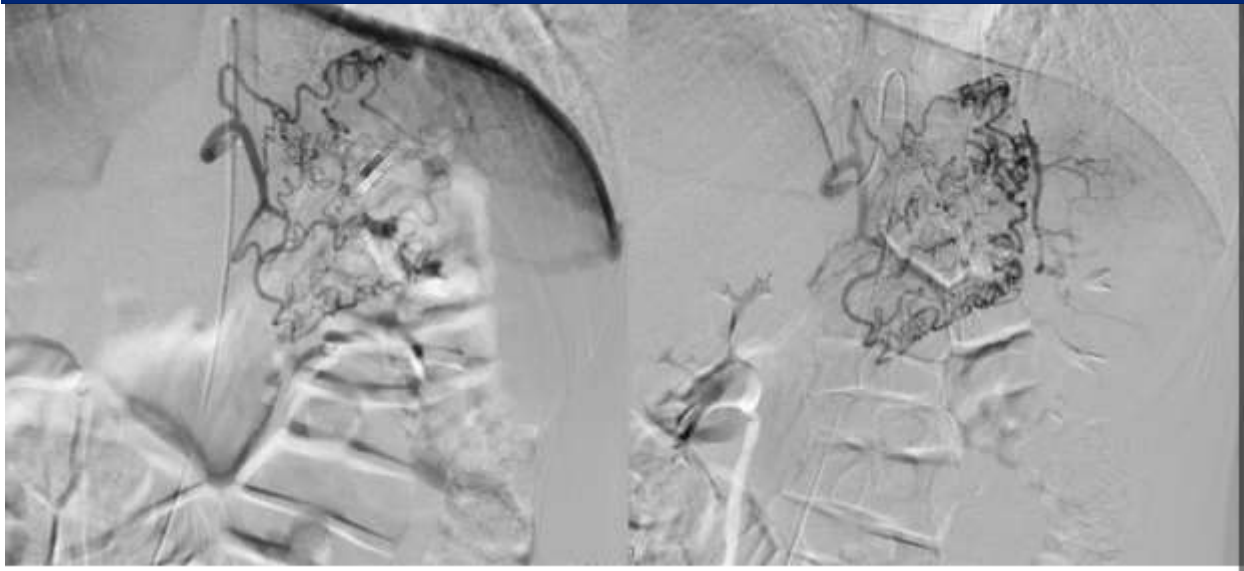


Figure 2: Arteriogram of the left gastric artery demonstrating a perigastric dysplastic angiomatous nidus. However, Satisfactory control (Figure 3) with almost complete exclusion of angiodysplasia,

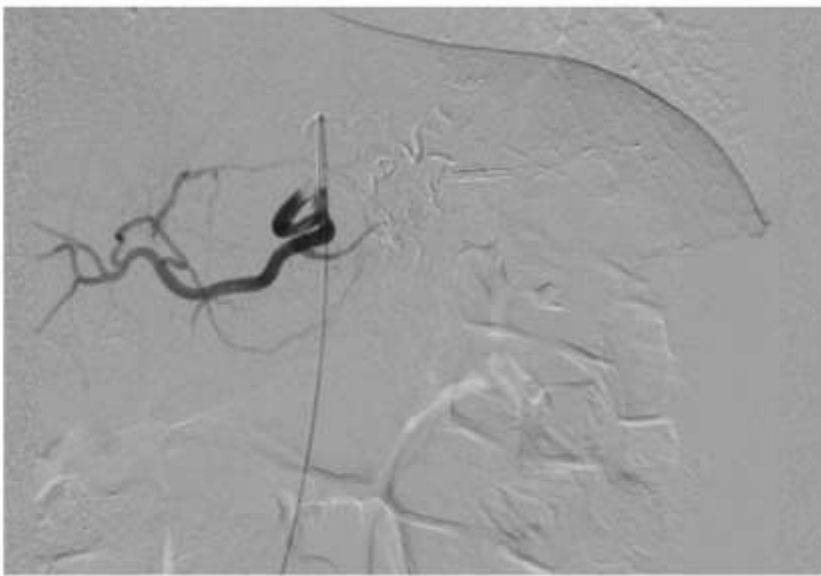


Figure 3: Angiographic control after embolization of angiodysplasia with biological glue.

The patient was then taken to the operating room:

The surgical exploration has objectified: serous peritoneal effusion of small abundance with epiplo-splenic adhesions covering some ischemic zone of the spleen

The procedure consisted of a total gastrectomy with a terminal-lateral oeso-jejunal anastomosis on a Y-shaped loop, with preservation of the spleen given its variegated aspect with the presence of ischemic zones.

The postoperative course was simple. The patient did not present a hemorrhagic recurrence. He was discharged with a lifetime injection of vitamin B12.

Discussion :

On a purely descriptive level, angiodysplasias are defined as small vascular lesions located on the surface and easily identified by endoscopy.

The detection rate of angiodysplasias has recently increased mainly due to imaging advances (endoscopic video capsule, high resolution endoscopy).

AIs are equally present in both sexes and are more frequent after 60 years of age [5,6]. E

They are most often revealed by occult or externalized digestive bleeding and are in the majority of cases multiple (40 to 60% of cases). They represent 4% of the etiologies of upper gastrointestinal bleeding [5,6] with a preferential gas-tric and/or duodenal location, and 40 to 60% of small intestinal lesions responsible for occult digestive bleeding [6,7].

The most frequent location of IAs is the colon, especially in its ascending portion and in the cecum (more than half of the cases). The prevalence of colonic IA in the general population was estimated at 0.83% in a study of 964 healthy patients [6,8].

The 3-year follow-up did not show any bleeding episodes, which allows to recommend a therapeutic abstention when an IA is discovered incidentally.

About 90% of IAs stop bleeding spontaneously [6], but the risk of recurrence is high. The risk of recurrence ranges from 25% to 65%, depending on the study, and is higher the longer the follow-up [6]. Surgical treatment is uncommon, up to 12% in some studies [6]. The mortality associated with hemorrhagic AIs is approximately 2% [6,9].

Angiodysplastic lesions occur both in the context of a congenital cause (e.g. Rendu-Osler-Weber disease) and in the acquired form.

It is assumed that the acquired, so-called idiopathic forms develop in the context of degenerative and ischemic processes [2].

The choice of treatment depends on the clinical context in which the AIs were identified. The objectives are to control the bleeding and prevent recurrence. Treatment is indicated when there is externalized bleeding or when the bleeding is occult, after eliminating any other cause of bleeding [6] [6].

The first-line treatment of DA is based on endoscopic ablation by means of argon plasma coagulation (APC) or electrocautery [2,6]. The efficacy rate of endoscopic control of hemorrhage is 80-90%, but the rate of recurrent hemorrhage of 20-30% is very high [2,6].

Since acquired angiodysplasia is part of a systemic disease, a pharmacological drug therapy approach is relevant. Thus, hormonal (estrogens/progesterone or somatostatin analogues) and anti-angiogenic (thalidomide, lenalidomide) treatments are examined in different studies [2,6]. Somatostatin is a cyclic peptide with a short half-life and inhibits the secretion of growth hormone, thyroid stimulating hormone (TSH), gastrin, insulin, glucagon, vasoactive intestinal peptide (VIP) and other intestinal hormones [18]. In addition, it exerts anti-angiogenic and vasoconstrictor actions via somatostatin receptor 2 [6]. Thalidomide and its better tolerated analogue lenalidomide inhibit the expression of vascular endothelial growth factor (VEGF) and thus have a direct anti-angiogenic effect. Lenalidomide has so far been successfully used for the treatment of ADGI in patients with von Willebrand disease, because in these patients the reduced action of vWF not only leads to a coagulation disorder but also stimulates angiogenesis

Conclusion:

Digestive angiodysplasia is a vascular lesion usually located in the right colon but is rarely found in the gastric tract.

Gastric angiodysplasia can lead to extensive life-threatening digestive hemorrhage.

The diagnosis is based on endoscopy and angioscanner, the treatment involves embolization

In case of failure or recurrence of the hemorrhage the solution is usually surgical

This was the case of our patient where a total gastrectomy had to be performed with good post-operative evolution

References:

1. Greisinger Melanie Bettina, Biedermann Barbara. Récidives hémorragiques dues à des angiodysplasies gastro-intestinales». DOI: <https://doi.org/10.4414/fms.2020.08367>. Forum Med Suisse. 2020;20(0304):54-56.
2. Nada Benhoummane. Angiodysplasies gastriques diffuses: A propos d'un cas et revue de la littérature. Thèse de médecine 2015.

3. Gordon FH, Watkinson A, Hodgson H. Vascular malformations of the gastrointestinal tract. *Best Pract Res Clin Gastroenterol* 2001;15(1):41-58.
4. Athanasoulis CA, Galdabini JJ, Waltman AC, et al. Angiodysplasia of the colon: a cause of rectal bleeding. *Cardiovasc Radiol* 1978 1977; 1(1):3-13.
5. Gabriel Rahmi. Angiodysplasie hémorragique du tube digestif. POST U 2014. Service d'Hépatogastroentérologie du Pr Christophe Cellier, Hôpital Européen Georges Pompidou.
6. Boley SJ, Brandt LJ. Vascular ectasias of the colon--1986. *Dig Dis Sci* sept 1986;31(9 Suppl):26S-42S.
7. Lecleire S, Iwanicki-Caron I, Di-Fiore A, et al. Yield and impact of emergency capsule enteroscopy in severe obscure-over gastrointestinal bleeding. *Endoscopy* 2012;44(4): 337-42.
8. Foutch PG, Rex DK, Lieberman DA. Prevalence and natural history of colonic angiodysplasia among healthy asymptomatic people. *Am J Gastroenterol* 1995;90(4): 564-7.
9. Cappell MS, Gupta A. Changing epidemiology of gastrointestinal angiodysplasia with increasing recognition of clinically milder cases: angiodysplasia tend to produce mild chronic gastrointestinal bleeding in a study of 47 consecutive patients admitted from 1980-1989. *Am J Gastroenterol* 1992;87(2): 201-6.