

Lower Gastrointestinal Bleeding Treated with Super Selective Arterial Embolization: A Case Report

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ABSTRACT

Lower Gastrointestinal Bleeding (LGIB) is a common condition around the world. We report a case of 44-year old man with LGIB due to arteriovenous malformation treated with embolization. Minimally invasive techniques have replaced surgical treatments in the last years.

Keywords

Gastrointestinal bleeding, Diverticular disease, Angiodysplasia.

Introduction

As the name suggests, LGIB is a condition that occurs at the inferior gastrointestinal tract, after the Treitz angle, and includes jejunum, ileum, colon and rectal bleeding. It represents approximately 20% of the cases of bleeding from digestive tract, with an increased incidence on patients with older age [4].

Identifying the source of bleeding is a priority and can be challenging when compared to upper gastrointestinal bleeding, either due to the different possible etiologies (diverticular disease, anorectal conditions, angiodysplasia), or due to the impossibility of carrying out intestinal preparation for the initial investigative exams, such as flexible rectosigmoidoscopy and colonoscopy. Despite this, there are other options: angiotomography, arteriography and scintigraphy. Emergency laparotomy for this type of bleeding is uncommon, since most episodes end spontaneously with conservative management [1].

In active bleeding, minimally invasive techniques, such as embolization, are now the first choice. They have success rates between 93 and 100%, regardless of the agent used, which can be coils, liquid agents or particles. The main agents used are platinum coils, N-butyl-cyanoacrylate and polyvinyl alcohol particles. Its main complication is intestinal ischemia, followed by rebleeding

in the short and long term. In our case, angiotomography was followed by arteriography because of its diagnostic and therapeutic characteristics [2,36].

Case Report

A 44-year old man, came to the emergency room due to digestive hemorrhage, with a three-day history of intestinal bleeding. At the entrance he had significant anemia (Hb 4g / 100ml), having received a total of eight red blood cell concentrates during the hospitalization. The patient was normotensive, tachycardic (HR 120bpm), conscious and oriented, with melena on rectal examination. Upper digestive endoscopy was performed, which showed findings within the parameters of normality and angiotomography that showed the presence of contrast outside the vessel, a branch of the superior mesenteric artery, suggesting an arteriovenous malformation, which could correspond to the bleeding site.

Thus, it was decided to perform mesenteric arteriography by right transfemoral puncture, which after catheterization of the superior mesenteric artery, showed an area of contrast leakage in the marginal branch of the vessel, in a topography compatible with the angiotomography.

Then, superselective catheterization was performed with a progreat microcatheter and embolization with 30% histoacryl. In control arteriography, after embolization, contrast leakage was not seen with maintenance of the distal circulation.

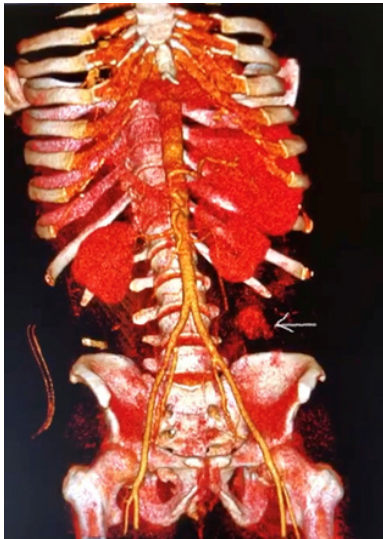
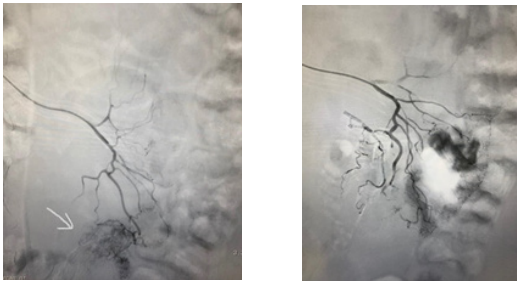


Figure 1: Arrow showing bleeding site on angiotomography.



Figures 2 and 3: Arteriography showing bleeding being shown by the arrow and in the other image after embolization with no leakage.

Kept under observation for serial control of hemoglobin and rebleeding rates, he was discharged after one week. The patient then returned 45 days later with severe abdominal pain, when

a new CT of the abdomen was performed, showing small pneumoperitonium and free fluid in the cavity, being submitted to exploratory laparotomy and performing segmental enterectomy for presenting a necrotic and perforated area of the small intestine. The patient had good evolution and was discharged five days after the procedure.

Conclusion

The diagnosis and management of lower gastrointestinal bleeding continue to evolve and remain challenging. Minimally invasive techniques have replaced surgical resection as the first choice, since they are so safe and effective, despite higher rates of rebleeding or ischemia, which does not affect the clinical outcome. In this context, superselective embolization and endoscopic treatment are used as complementary therapies, since the former is better for more intense bleeding, while the latter has better results in less abundant bleeding.

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