Treatment of a benign, anastomotic refractory rectal stricture with an AXIOS stent

Fig. 1 a,b Placement of a fully covered, self-expanding, metal stent under radiologic vision, for treatment of a benign anastomotic rectal stricture.

Fig. 3 Radiologic view of the fully expanded stent inside of the stenosis.

Fig. 4 Endoscopic view of the stenosis immediately after withdrawal of the stent.

Fig. 2 Endoscopic view of the deployed stent.

Video 1 Placement and removal of a fully covered, self-expanding, metal stent for the treatment of postsurgical rectal stricture.

A 49-year-old man with a history of type 2 diabetes mellitus, chronic renal failure, and sigmoid adenocarcinoma underwent a laparoscopic left hemicolectomy. A second surgery was necessary after unsuccessful endoscopic dilation of an anastomotic stricture located 12 cm from the anus.

After five further surgical procedures for different complications, a repeat anastomosis was necessary at 5 cm from the anus. However, a stricture developed at this anastomosis and could not be resolved by traditional endoscopic dilation. The patient was referred to CIDMA (Centro de Innovaciones Digestivas Martínez Alcalá) for endoscopic treatment.

During endoscopy, a severe, filiform, eccentric stenosis was observed at 5 cm from the anus. Successive dilations were

performed using a through-the-scope, over-the-wire balloon under fluoroscopic guidance. Despite this aggressive protocol, the stenosis remained tight, with a diameter of <10 mm. Therefore, placement of a novel, fully covered, self-expanding metal stent (SEMS) was proposed (AXIOS AXS15-10; Xlumen Inc., Mountain View, California, USA) (Video 1). The stent was placed under endoscopic and radiologic guidance (Fig. 1, Fig. 2).

The prosthesis was well tolerated without complications or the need for analgesia (Fig. 3), and was removed 40 days later (Fig. 4, Video 1). The patient remained asymptomatic and with adequate intestinal transit after 2 months' follow-up.

SEMS are not widely used for benign colon disease [1]. Risks associated with the use of SEMS include perforation, chronic

abdominal pain, migration or late prosthesis obstruction. Biodegradable stents are an alternative and their placement is an effective treatment in anastomotic strictures of the colon, as they are more flexible than metal or plastic stents and do not require removal because they disintegrate after 11–12 weeks [2]. However, these stents are wider, longer, and thus poorly tolerated, especially in locations close to the anus.

The patient presented in this report had a complex, severe, and refractory anastomotic stenosis, located very close to the anus, and therefore was not a candidate for treatment with currently available prostheses. The AXIOS echo-endoscopic stent, which was designed for treatment of pancreatic pseudocysts, is a completely covered SEMS with proximal and distal

flanges and a smaller central section, which measures 1.0 or 1.5 cm in diameter. This stent is shorter than other stents and, as demonstrated in the current case, may also be used to treat benign, complex, anastomotic rectal strictures.

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Felipe Martínez Alcalá¹, Felipe R. Martínez-Alcalá García¹, Andres Sánchez-Yague², Alvaro Martínez-Alcalá García¹, Jose Antonio Ciria Avila¹, Jose Manuel Perez Pozo¹

¹ CIDMA (Centro de Innovaciones Digestivas Martínez Alcalá), Sevilla, Spain

² Hospital de Costa del Sol, Marbella, Málaga, Spain

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Corresponding author

Alvaro Martínez-Alcalá García, MD
 Calle San Vicente 36
 Cp: 41002 Sevilla
 Spain
 Fax: +34-66-2372216
alvaromalcala@gmail.com