

IMAGE OF THE MONTH

Target sign: An important diagnostic tool

Target sign: uma importante ferramenta de diagnóstico

Richard Azevedo*, Ana Caldeira, António Banhudo



Gastroenterology Department, Amato Lusitano Hospital, Castelo Branco, Portugal

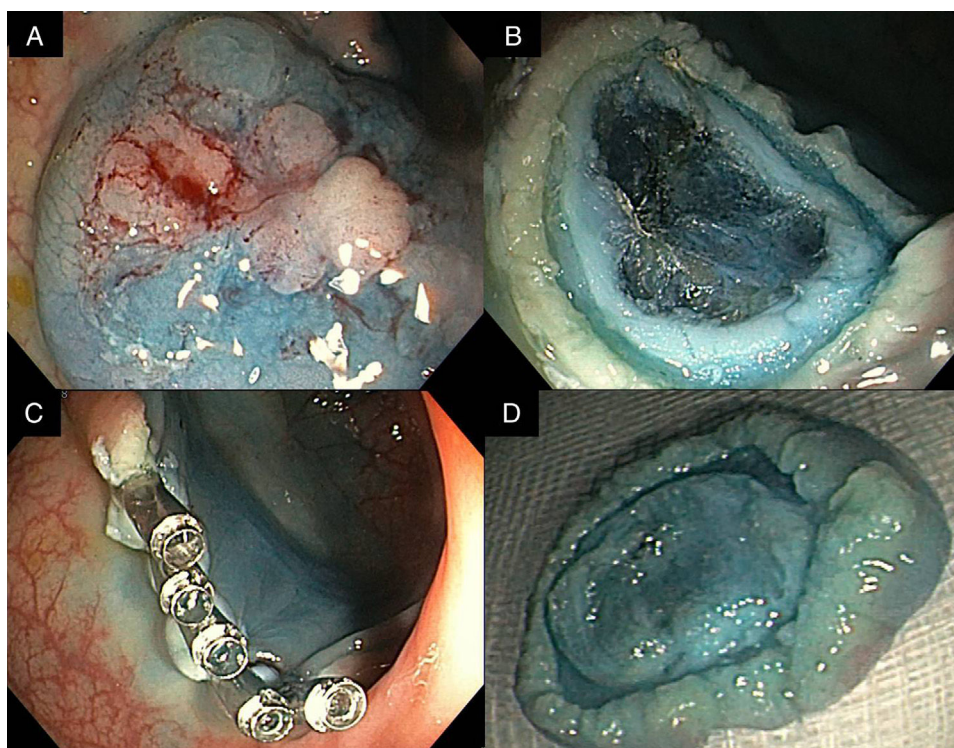


Figure 1 (A) Endoscopic image of the 20 mm non-granular laterally spreading colonic tumor. (B) The mirror target sign identified immediately after EMR of the lesion. (C) Endoscopic closure of the MP defect with 5 clips. (D) Target sign on the resected specimen.

* Corresponding author at: Gastroenterology Department, Amato Lusitano Hospital, Avenida Pedro Álvares Cabral, 6000-085 Castelo Branco, Portugal.

E-mail address: richardazevedo13@gmail.com (R. Azevedo).

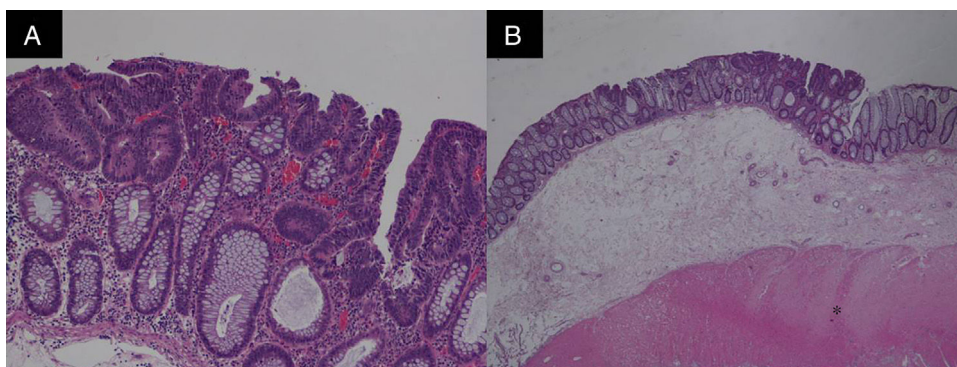


Figure 2 (A) High-grade dysplasia tubular adenoma without submucosal invasion. $\times 100$. Hematoxylin-eosin staining. (B) Specimen showing partial resection of the muscularis propria (*). $\times 20$. Hematoxylin-eosin staining.

A 69-year-old man was submitted to an *en bloc* endoscopic mucosal resection (EMR) of a 20-mm non-granular laterally spreading tumor, Paris Classification 0-IIa,c, located in the sigmoid colon (Fig. 1A). Immediately after EMR an imminent colonic perforation was identified: examination of the mucosal defect revealed a mirror target sign (Fig. 1B). The defect was successfully closed with 5 endoscopic clips (Fig. 1C). The specimen was retrieved and the target sign was confirmed on examination of the underside of the lesion (Fig. 1D). The patient was discharged 6 h after uneventful clinical surveillance. Histopathological assessment revealed a high-grade dysplasia tubular adenoma without submucosal invasion and clear margins (Fig. 2A), confirming partial muscularis propria (MP) resection (Fig. 2B).

Colonic perforation may occur in up to 10% of EMR and endoscopic submucosal dissections. The target sign, an easily recognizable endoscopic marker of

the MP resection, indicates a potential risk for colonic perforation. The mirror target sign is characterized by the presence of 2 concentric white rings in the mucosal defect: the inner ring, corresponding to the point of MP resection, and the outer ring corresponding to the site of cauterized mucosa.¹

Early identification of this sign allows prompt endoscopic closure, avoiding one of the most feared complications – colonic perforation. As so, it constitutes an endoscopic diagnostic tool with important clinical value.

Reference

1. Swan MP, Bourke MJ, Moss A, Hopper A, Metz A. The target sign: an endoscopic marker for the resection of the muscularis propria and potential perforation during colonic endoscopic mucosal resection. *Gastrointest Endosc.* 2011;73:79–85, <http://dx.doi.org/10.1016/j.gie.2010.07.003>.