



IMAGE OF THE MONTH

Duodenal target sign

Signo del blanco duodenal

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A 67-year-old man with MUTYH-associated polyposis underwent an en bloc endoscopic mucosal resection (EMR) of a 20mm non-granular laterally spreading tumor, type 0-IIa of the Paris classification, in the duodenum, distally to the ampulla region (Fig. 1).

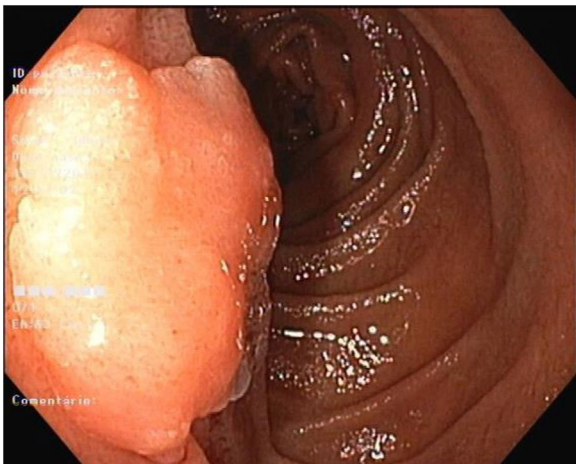


Figure 1 Upper endoscopic image revealing a non-granular laterally spreading tumor in the duodenum.

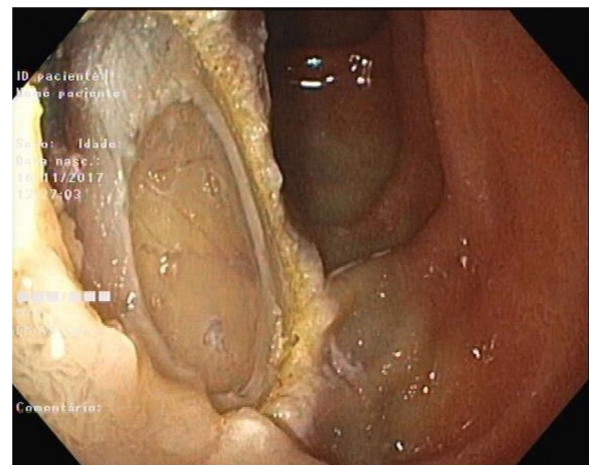


Figure 2 Endoscopic image showing the “target sign”.

After resection, a “target sign” was observed (Figs. 2 and 3). The defect was closed by endoscopic clipping using five clips in a zipper fashion and a nasojejunal feeding tube was placed distally to the EMR region.

Postprocedure abdominal CT with contrast showed a thin layer of retroperitoneal free air, but no contrast extravasation was observed. The patient was managed conservatively and discharged four days later, completely asymptomatic.

EMR for the duodenum carries a high risk of perforation, due to the thin muscle layer in this region, compared with the remaining digestive tract. Generally, the risk for

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Figure 3 Inadvertently resected *muscularis propria* creating the “target sign”.

perforation is higher in large lesions (>20 mm)¹. Early diagnosis of perforation can be made by careful analysis of the post-EMR specimen which may reveal a “target sign”, a marker of resection of the muscularis propria and imminent

perforation. Colonic target sign is common, but it is rare in the duodenum².

Recognition of this sign allows endoscopic management instead of surgery, with a shorter hospital stay and fewer adverse events.

Conflict of interests

None of the authors has any financial/conflicting interests to disclose.

References

1. Ochiai Y, Kato M, Kiguchi Y, Akimoto T, Nakayama A, Sasaki M, et al. Current status and challenges of endoscopic treatments for duodenal tumors. *Digestion*. 2019;99:21–6, <http://dx.doi.org/10.1159/000494408>.
2. Swan MP, Bourke MJ, Moss A, Williams SJ, 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>.