Endoscopic resection of early-stage SMAD4 juvenile polyposis does not prevent disease spreading in the stomach

To the best our knowledge, juvenile polyposis with a SMAD4 germline mutation is a rare disease [1, 2], and its precise endoscopic aspect has been described in the colon [3] but not in the stomach. The natural history of this particular polyposis has not been well described.

We report a case of early-stage SMAD4 polyposis in a 25-year-old woman who was also receiving treatment for Rendu-Osler disease. It was an early-stage SMAD4 polyposis with a single large lesion (▶ Fig. 1) surrounding the cardia. According to the endoscopic aspect in white-light imaging, the lesion was nodular (Paris classification Is). Using narrow-band imaging (Olympus, Tokyo, Japan), dual focus, and acetic acid dyeing, the mucosal pattern appeared regular with large pits consistent with hyperplasia. As the lesion had been detected at an early stage, we decided to attempt endoscopic submucosal dissection (ESD) to remove all of the polyp with margins in order to stop the evolution of the disease (▶ Video 1). En bloc resection was achieved and appeared to be endoscopically complete; the resected specimen measured 8 × 3 cm. Histology confirmed the hyperplastic nature of the polyp with free margins (focal contact in few points). During the follow-up period, the dissected area had a depressed aspect without recurrence at the scar site. However, the hyperplastic polyp recurred all around the previous resection site and spread all around the cardia (▶ Fig. 2).

In parallel, a second small juvenile polyp was present in the fundus and was described with blue-laser imaging and linked-color imaging. The lesion was small (<5 mm) and presented the same regular mucosal pattern with hyperplastic features (▶ Fig. 3, ▶ Fig. 4).
SMAD4 polyposis at an early stage seems to begin around the cardia but endoscopic resection, even when complete, does not prevent the lesion from spreading all around the cardia.

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Competing interests
None

The authors
Etienne Baldysiak1, Nicolas Benech1, Laura Calavas1, Jérôme Rivory1, Pierre-Marie Lavrut2, Jean-Christophe Saurin1, Mathieu Pioche1,3
1 Department of Endoscopy and Gastroenterology, Pavillon L, Edouard Herriot Hospital, Lyon, France
2 Digestive Pathology, Hospices Civils de Lyon, France
3 Inserm U1032 LabTau, Lyon, France

Corresponding author
Mathieu Pioche, MD
Endoscopy Unit – Digestive Disease department, Pavillon L – Edouard Herriot Hospital, 69437 Lyon Cedex, France
Fax: +33-4-72110147
mathieu.pioche@chu-lyon.fr

References
Fig. 4 Histology of the lesion with hyperplastic features.