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IMAGE | ENDOSCOPY

ORISE Gel: A Submucosal Lifting Agent Mimics Mucin in Endoscopic Resection Specimen

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CASE REPORT

A 61-year-old woman with a medical history of right hemicolectomy for colon adenocarcinoma with previous surveillance colonoscopies showing no evidence of the disease was found to have a nearly circumferential sessile polypoid lesion at the hepatic flexure on recent surveillance colonoscopy. A subsequent endoscopic evaluation revealed a laterally spreading granular tumor measuring approximately 70 mm × 60 mm in size and extending across 2 consecutive colonic folds at the hepatic flexure. The lesion did not involve the previous ileocolic anastomosis and was present at least 5 cm from the unremarkable anastomosis site. On narrow-band imaging, the lesion was classified as type IIB based on the Japan NBI Expert Team classification (Figure 1).[1] A total of 40 mL of the viscous agent ORISE Gel (Boston Scientific, Marlborough, MA) was used during the procedure for submucosal lifting. Complete piecemeal endoscopic mucosal resection (EMR) was achieved, and the specimen was successfully retrieved (Figure 2). Pathologic examination revealed colonic mucosal fragments with tubular adenoma and multifocal areas of high-grade dysplasia. Focally, superficially invasive adenocarcinoma into submucosa was identified. Invasive carcinoma was present within 1 mm from the excision margin. In addition, multiple resection fragments demonstrated abundant amorphous pale acellular substance in the submucosa reminiscent of mucin

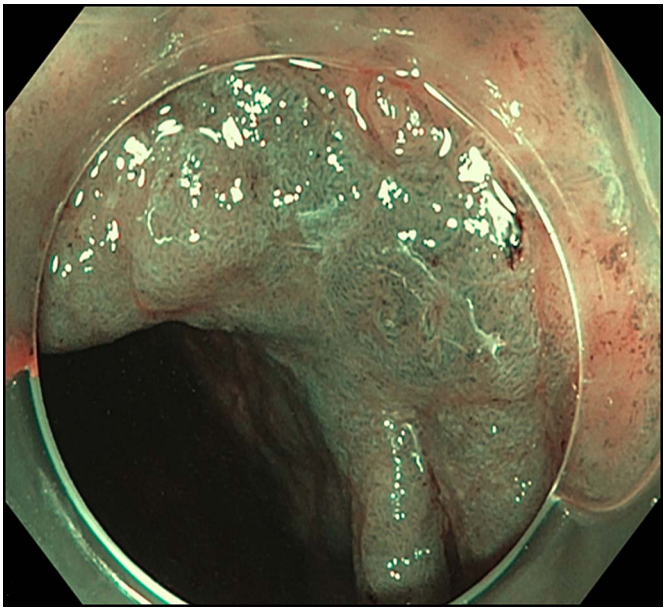

Figure 1. Narrow band imaging demonstrated a type IIb lesion.

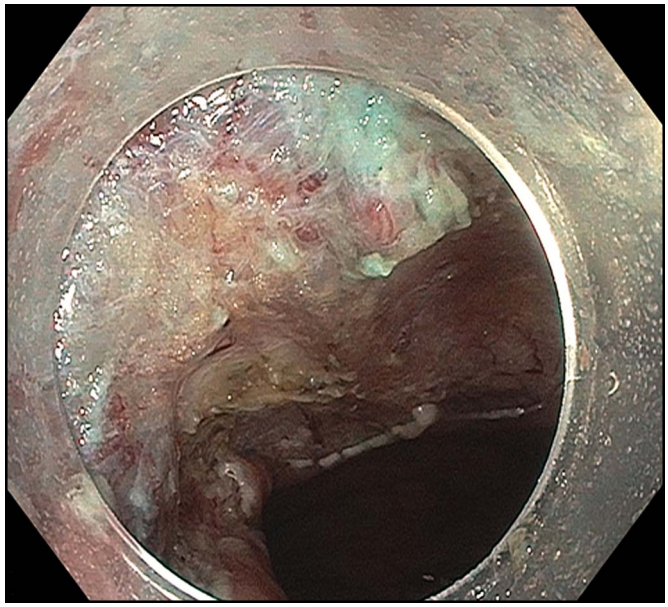

Figure 2. Complete piecemeal endoscopic mucosal resection was achieved with the viscous agent, ORISE Gel (Boston Scientific), and the specimen was successfully retrieved.

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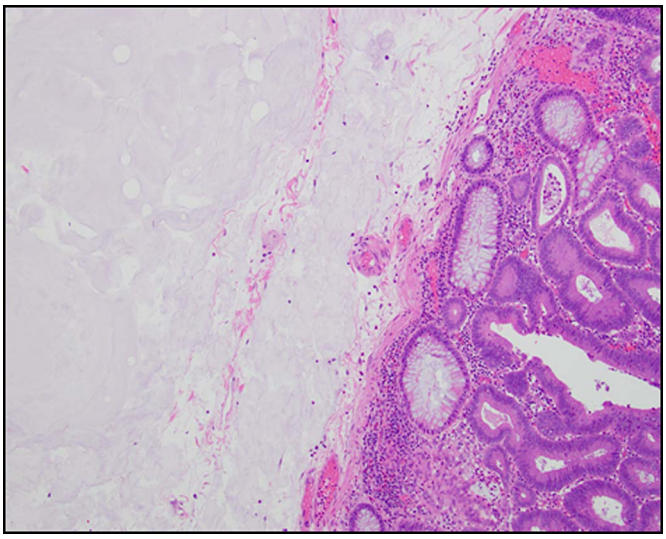

Figure 3. Resection fragment showing tubular adenoma and submucosa with abundant amorphous pale acellular substance reminiscent of mucin.

(Figure 3). There was no associated inflammatory response. Mucicarmine special stain was negative in the amorphous substance, whereas positive staining was noted in the epithelial mucin (Figure 4). Based on current findings and endoscopy reports, it was determined that the mucin-like material was consistent with ORISE Gel.

In recent years, endoscopic resection (ER) has gained traction for the management of dysplastic and superficial cancers in the gastrointestinal tract because it is more cost-effective and associated with lower morbidity and higher patient quality of life.[2,3] EMR is a commonly used technique for the en bloc or piecemeal resection of colorectal laterally spreading tumors. The use of viscous lifting solutions during EMR has been recently shown to be associated with higher rates of complete resection and lower recurrence when compared with normal saline.[4] Multiple viscous fluids are currently available for clinical use. ORISE Gel is a proprietary viscous fluid that was recently approved by the Food and Drug Administration as an injection fluid for gastrointestinal ER.[5] In this case presentation, we report the histologic appearance of the ORISE Gel in the EMR specimen. Histologically, ORISE Gel appears as an amorphous substance and closely resembles gastrointestinal mucin. However, mucicarmine special stain, which strongly highlights gastrointestinal mucin, is negative. Given these findings, we conclude that ORISE Gel may potentially hinder the histologic evaluation of mucin-predominant lesions such as mucinous adenocarcinoma or adenocarcinoma with mucinous component. Hence, the gastroenterologist needs to report the use of ORISE Gel on the requisition form or endoscopic report. In addition, pathologists must be aware of the histologic appearance of ORISE and be prepared to use additional stains to prevent overinterpretation of such findings in the ER specimen.

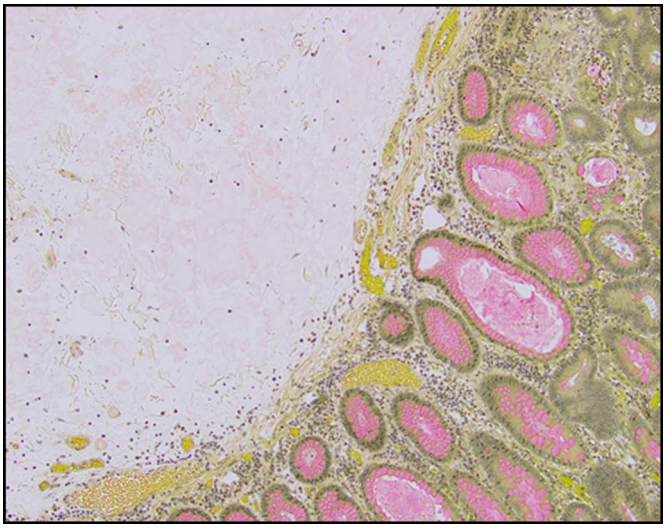

Figure 4. Mucicarmine special stain was negative in the amorphous substance and positive staining in the epithelial mucin.

DISCLOSURES

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Informed consent was obtained for this case report.

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