Optical biopsy in real time by endocytoscopy: a case of juvenile polyp

Endocytoscopy allows ultra-high magnification, thereby enabling observation of structural and cellular atypia [1, 2]. Additionally, endocytoscopy has been reported to have high diagnostic performance in differentiating neoplastic from non-neoplastic colorectal polyps, and can provide an alternative histological diagnosis to standard biopsy [3, 4].

A 44-year-old man underwent colonoscopy at another hospital and a sessile polyp of remarkable redness was detected. Endoscopically the lesion was suspected to be early cancer and he was referred to our hospital. White-light imaging revealed a reddish lesion with erosion in the rectum. The lesion was of the Is type, 15 mm in diameter (▶ Fig. 1a). Chromoendoscopy showed elongated and irregularly arranged ducts (▶ Fig. 1b,c). A dense pattern was observed close to the dilated ducts by magnifying endoscopy with narrow-band imaging (▶ Fig. 1d). Therefore, we suspected the lesion to be a hamartoma such as a juvenile polyp. Endocytoscopy (CF-Y0058-I; Olympus, Japan) showed elongated ducts with no apparent irregular nuclear findings around the ducts, and these features suggested that the lesion was non-neoplastic (▶ Video 1). Ultimately, we diagnosed the lesion endoscopically as a juvenile polyp and endoscopic mucosal resection was performed. Histologically, edematous inflamed stroma and cystically dilated glands without atypia were seen (▶ Fig. 2). Thus, the lesion was diagnosed as a juvenile polyp.

Juvenile polyp is known to be a smooth red mass projecting into the lumen of the colorectum. However, on diagnostic endoscopy it is sometimes difficult to differentiate juvenile polyp from cancer due to its form and structural features such as surface erosion and roughness [5]. Endocytoscopy, on the other hand, highlights the structure of nuclei and ducts, and therefore made it easy on this occasion to diagnose the non-neoplastic lesion with high confidence.

▶ Video 1 Endocytoscopic images were obtained after staining with 1% methylene blue and 0.05% crystal violet. They showed regular elongated ducts with no apparent irregular nuclear findings around the ducts.
In this case, the lesion was suspected at the referring hospital to be cancer, but our precise examination led us to suspect on the basis of magnifying endoscopy that it was a juvenile polyp, and the diagnosis was confirmed by endocytoscopy in real time. Subsequently, we were able to select appropriate treatment without a standard biopsy.

Endoscopy_UCTN_Code_CCL_1AD_2AC

Acknowledgments
This work was supported in part by the National Cancer Center Research and Development Fund (29-A-13) and AMED under Grant Number JP18hk0102034.

Competing interests
None

References


Bibliography

DOI https://doi.org/10.1055/a-1028-6973
Published online: 7.11.2019
Endoscopy 2020; 52: E142–E143
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

ENDOSCOPY E-VIDEOS
https://eref.thieme.de/e-videos

Endoscopy E-Videos is a free access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online.

This section has its own submission website at https://mc.manuscriptcentral.com/e-videos

The authors
Kaizo Kagemoto1,2, Yutaka Saito1, Yasuhiro Mizuguchi1, Taku Sakamoto1, Hirokazu Taniguchi2, Shigeki Sekine2, Tetsuji Takayama2
1 Endoscopy Division, National Cancer Center Hospital, Tokyo, Japan
2 Clinical Laboratory Division, National Cancer Center Hospital, Tokyo, Japan
3 Department of Gastroenterology and Oncology, Institute of Biomedical Sciences, Tokushima University Graduate School, Japan

Corresponding author
Yutaka Saito, MD, PhD
Endoscopy Division, National Cancer Center Hospital, 5-1-1 Tsukiji, Chuo-ku, Tokyo, 104-0045, Japan
ytsaito@ncc.go.jp

Fig. 2 a, b Hematoxylin and eosin (H&E) staining: the edematous open inflamed stroma and cystically dilated glands without atypia were seen (a orig. mag. ×10, b orig. mag. ×40).