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Rapid progression of residual rectal cancer after cold snare polypectomy

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Cold snare polypectomy (CSP) is widely performed to resect small colorectal polyps. A 74-year-old man underwent colonoscopy revealing a polyp in the lower rectum that had been constant in size for 4 years (Fig. 1A). Magnified narrow-band imaging (NBI) showed slight irregularities (Fig. 1B); however, the lesion was resected with CSP. Additional snaring was performed for residual tumor on the margins. Histopathology revealed an adenocarcinoma that had an adenoma component with unclear margins. Three months later, a recurrent tumor was detected (Fig. 1C) and endoscopic submucosal dissection (ESD) was performed. Magnified NBI in the ESD specimen showed irregular patterns (Fig. 1D). Histopathology revealed an intramucosal adenocarcinoma with negative margins. The Ki-67 expression level, indicating cellular proliferative activity, was higher in the ESD specimen than in the CSP specimen, while there was no significant difference in p53 expression levels (Fig. 2).

Given the possibilities of incomplete resection, CSP is recommended only for benign tumors [1]. As the tumor progressed rapidly after CSP in this case, we suspect that the additional snaring was incomplete, and that more detailed observations were required before and after CSP. It has been reported that incomplete endoscopic mucosal resection (EMR) might induce rapid tumor growth [2], and residual tumors after incomplete EMR showed higher Ki-67 expression levels than primary tumors [3]; however, no reports have shown rapid progression after CSP. Thus, malignant tumors should not be resected with CSP because of the possibility of rapid tumor growth after incomplete CSP, in addition to the high possibilities of incomplete resection.

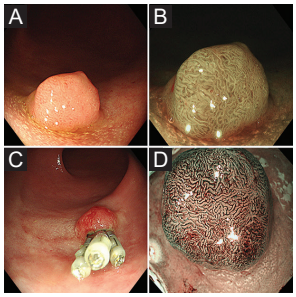

Figure 1 Endoscopic images of the sessile polyp in the lower rectum. (A) A polyp was detected in the lower rectum. (B) Narrow-band imaging (NBI) with magnification showed slight irregular surface patterns. (C) A residual tumor was detected on the scar 3 months after cold snare polypectomy; some hemostatic clips persisted. (D) A specimen resected by endoscopic submucosal dissection. NBI with magnification for the resected specimen showed irregular surface and vessel patterns

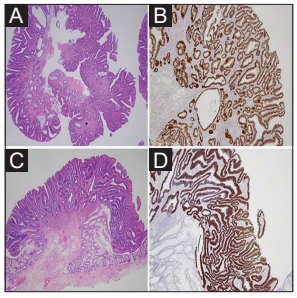

Figure 2 Histopathological findings. (A,B) A specimen resected by cold snare polypectomy (CSP). The lesion was diagnosed as an adenocarcinoma having an adenoma component with unclear horizontal and vertical margins. (A) Hematoxylin and eosin (H and E) staining (1×), showing partial fragmentation. (B) The status of Ki-67 was moderate (Ki-67 staining 4×). (C) A specimen resected by endoscopic submucosal dissection (ESD) (H and E, 1×). It was diagnosed as intramucosal cancer with negative margin. (D) The Ki-67 status of the ESD specimen was higher than that from the CSP resection (Ki-67 staining 4×)

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Conflict of Interest: None

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