

Natural progression of a nonpolypoid colon cancer: endoscopic morphological changes over 3 years

A 63-year-old woman underwent surveillance colonoscopy, which revealed a flat elevated polyp (IIa), about 5 mm in diameter, in the cecum (● Fig. 1). A second colonoscopy (2 years later) showed a flat elevated polyp with a mild depression, about 5 mm in diameter (IIa + IIc) (● Fig. 2). A third colonoscopy (3 years later) revealed a faintly reddish depressed lesion (IIc), about 9 mm in diameter (● Fig. 3a, b). Magnifying chromoendoscopy showed a type VI pit pattern (Kudo classification) in the depression (● Fig. 3c). Endoscopic resection was carried out for histological evaluation. Histologically, the resected specimen was composed of well to moderately differentiated adenocarcinoma without any adenomatous components, which had infiltrated superficially into the submucosal layer along with lymphatic invasion (● Fig. 4). Laparoscopy-assisted colectomy was thereafter carried out with curative intent. Histologically, no locally residual tumor or lymph node metastasis was detected.

A few retrospective analyses using radiographic images have demonstrated the development of colorectal tumors [1–3];

however, the progression of nonpolypoid cancer, especially the depressed type, still remains obscure. Through retrospective analysis of endoscopic images [4], the present case showed remarkable morphological changes. We hypothesized that the initial lesion could be an adenomatous polyp, that the mild depressed area at the second examination was cancerous, and that the cancerous depressed area gradually replaced the surrounding flat adenoma horizontally and invaded the submucosal layer vertically. The doubling time of this lesion should be 6.3 months, therefore, based on the growth rate of colorectal cancers reported in a retrospective study [2], this lesion can be considered to have rapidly developed from a mucosal lesion into a submucosal cancer with lymphatic invasion at even as small a size as 9 mm. As the natural history of nonpolypoid cancer, especially during the process of the initial shift from the colorectal mucosa to the submucosa, has not yet been fully elucidated, the present report is invaluable because it demonstrates the progression of the lesion using colonoscopy.

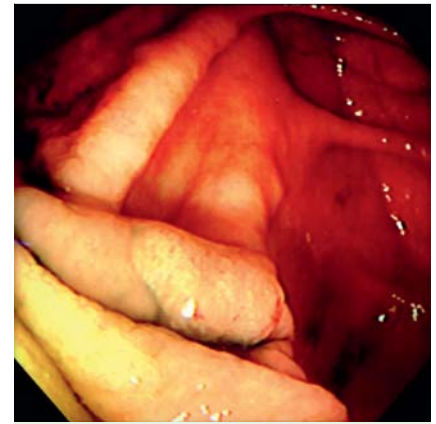


Fig. 1 Initial endoscopy findings. A flat elevated polyp (IIa), about 5 mm in diameter, in the cecum.



Fig. 2 Second endoscopy findings (2 years after the initial endoscopy). A flat elevated polyp with a mild depression (IIa + IIc), about 5 mm in diameter at the same site.



Fig. 3 Third endoscopy findings (3 years after the initial endoscopy). **a** A faintly reddish depressed lesion, about 9 mm in diameter at the same site. **b** After spraying with dye, the lesion was seen to be irregular in shape, with a slight elevation within the depression (IIc). **c** Magnifying chromoendoscopy using 0.05% crystal violet showed a type VI pit pattern in the depression.

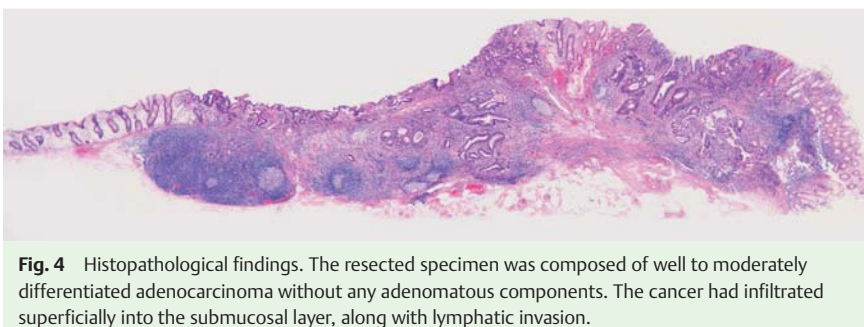


Fig. 4 Histopathological findings. The resected specimen was composed of well to moderately differentiated adenocarcinoma without any adenomatous components. The cancer had infiltrated superficially into the submucosal layer, along with lymphatic invasion.

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References

- 1 *Matsui T, Yao Y, Yao K et al.* Natural history of superficial depressed colorectal cancer: retrospective radiographic and histologic analysis. *Radiology* 1996; 201: 226–235
- 2 *Matsui T, Yao T, Iwashita A.* Natural history of early colorectal cancer. *World J Surgery* 2000; 24: 1022–1028
- 3 *Umetani N, Masaki T, Watanabe T et al.* Retrospective radiographic analysis of nonpedunculated colorectal carcinomas with special reference to tumor doubling time and morphological change. *Am J Gastroenterol* 2000; 95: 1794–1799
- 4 *Matsui T, Tsuda S, Iwashita A et al.* Retrospective endoscopic study of developmental and configurational changes of early colorectal cancer: eight cases and a review of the literature. *Dig Endosc* 2004; 16: 1–8

Bibliography

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