

## Advanced adenocarcinoma in a laterally spreading adenoma within a colonic diverticulum, followed-up for 4 years

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### To the Editor,

Colonic neoplasia can arise from normal mucosa near or within a diverticulum. However, an adenocarcinoma arising within a diverticulum is a very rare phenomenon and to date only sporadic cases have been reported (1-8). Due to the lack of muscular layers within the diverticulum, the use of endoscopic polypectomy of a tumour within the diverticulum carries a risk of colonic perforation. Additionally, it is usually difficult to determine whether the tumour component is benign or malignant; hence, special precautions should be implemented in the diagnosis and treatment of such patients. A 71-year-old man was admitted to Nishijin Hospital because of melena on November 5, 2009. A laterally spreading tumour (LST) of adenoma developing in a right-sided colonic diverticulum was observed on colonoscopy, and pathological examination revealed moderate atypia from a biopsy obtained in April, 2005. There were no changes observed in the tumour four years later as determined by endoscopic examination on his latest admission. Surgical intervention was consequently recommended but refused by the patient. The patient underwent an emergent colonoscopy for his melena, which showed right-sided diverticular hemorrhage. Endoscopic hemostasis with clips was unsuccessfully attempted twice, after which an emergency right hemicolectomy was performed. Grossly, the diverticulum with clips was located in the middle of the ascending colon. The LST was a flat elevated lesion, measuring 20 mm × 15 mm, located around a diverticulum near the cecum and running through the diverticulum (Fig. 1a). Histopathological examination revealed a lack of muscular layers that accompanied the diverticulum. The LST was an adenoma which showed moderate atypia throughout the diverticulum (Fig. 1b). A well-differentiated adenocarcinoma was also identified with the tubular adenoma within the diverticulum (Fig. 1c). Although the carcinoma was invading the neighboring serosa, it had not yet breached the serosal surface and remained localized within the diverticulum. Both the adenoma and adenocarcinoma coexisted within the diverticulum (Fig. 1d). Following his operation, the patient was subsequently discharged without complications. Cohn *et al.* (5) states that cancers arising within the diverticulum are often advanced at initial presentation

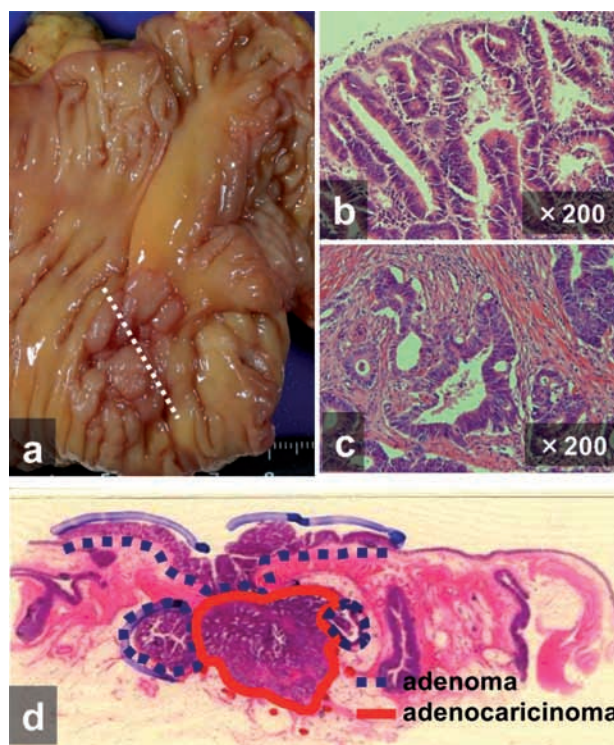


Fig. 1. — Macroscopic and microscopic findings of LST  
 a. Macroscopic findings of LST. A LST of a flat elevated lesion, measuring 20 mm × 15 mm, was located around a diverticulum near the cecum and was running through the diverticulum; b. Magnification of colonic lumen, in which only the adenoma component existed (× 200); c. Magnification near the serosa within the diverticulum, including a well-differentiated adenocarcinoma (× 200); d. Summary of pathological findings of LST.

and diagnosis, and patients may not seek medical attention until perforation has occurred. In view of the growth of superficial carcinomas into advanced carcinomas within diverticula, carcinomas arising from a diverticulum may more rapidly spread to the serosal surface than

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carcinomas arising from normal bowel, due to the lack of musculature within the colonic diverticula (7). Therefore, surgical treatment is recommended for mucosal tumours or adenomatous polyps near or within a diverticulum. Previously, such patients were identified late as they would only present for surgical intervention following perforation or abscess formation. Currently, most patients are diagnosed following an incidental finding on imaging. The development of more accurate and sensitive diagnostic imaging technology such as endoscopy has also improved the patient outcomes. In this patient, we were not able to detect the formation of the adenocarcinoma within the diverticulum over a four year period because the orifice of the diverticulum was narrow, and the adenocarcinoma remained hidden under the mouth of the diverticulum. The evaluation of a LST arising within a diverticulum is difficult and we noted that patients often do not receive medical attention until the tumour was well-advanced.

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