Nodal metastasis after successful endoscopic submucosal dissection for colorectal mucosal cancer

A 64-year-old man underwent successful en bloc endoscopic submucosal dissection (ESD) for the management of two neighboring, laterally spreading tumors that were small, well-differentiated adenocarcinomas. The precise process and results of this procedure have been previously reported [1]. Both lesions were confined to the lamina propria without lymphovascular involvement (**Fig. 1**) and had clear resection margins.

The procedure was considered to be curative in that colonic mucosal cancers do not metastasize to the lymph nodes or distant organs [2,3]. Follow-up studies were performed at 6, 18, and 30 months after the procedure. Only ESD scars without any residual or recurrent lesions were found during each colonoscopy. However, at the last follow-up, computed tomography (CT) and positron emission tomography (PET) showed two newly developed, small perirectal lymph nodes (**Fig. 2**).

He underwent surgery, at which no remnants of tumor were observed in the resected colon but metastatic carcinoma was found in the lymph nodes (**Fig. 3**).

ESD is now being increasingly used worldwide for the treatment of colorectal mucosal cancer[4] because en bloc resection of a lesion is possible regardless of lesion size. In the present case, ESD was appropriate treatment for both lesions according to the histologic curative criteria [3], and the lesions appeared to have been successfully treated. However, regional nodal metastases were found without any remnant or recurrent lesions at the resection sites during follow-up studies 30 months after the original procedure.

The efficacy of colorectal ESD cannot be completely denied based on the results from the present case; however, every endoscopist should keep in mind that even intramucosal colorectal cancer has some risk of future nodal metastasis. A recent report mentioned the possibility of nodal metastasis in gastric mucosal cancer [5]. Although to date there are no similar reports for colorectal cancer, multimodal evaluations conducted at regular intervals after the procedure seem to be warranted.

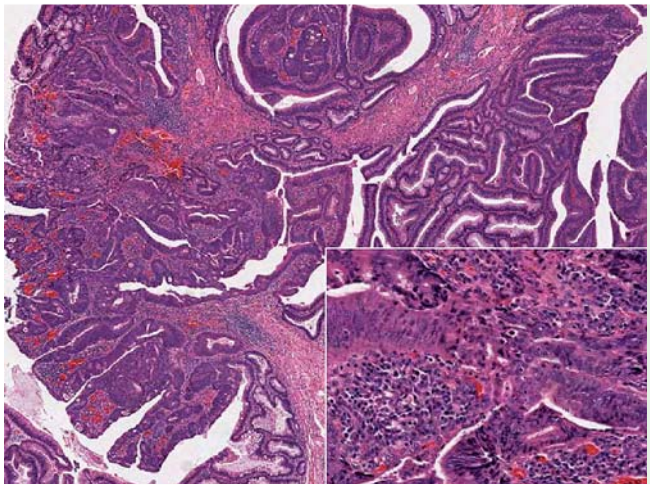

Fig. 1 Histological findings after endoscopic submucosal dissection (ESD) of a distal rectal lesion showing a focal adenocarcinoma arising from a tubulovillous adenoma with low grade dysplasia. The depth of invasion was confined to the lamina propria and the lateral resection margin of the lesion was free from tumor. (Hematoxylin and eosin [H&E], magnification × 40, insert × 100.)

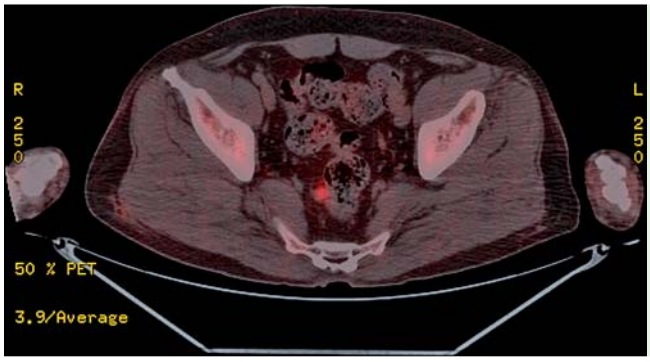

Fig. 2 Follow-up positron emission tomography (PET) scan 33 months after the original procedure showing two hypermetabolic lymph nodes in the pericolic chain.

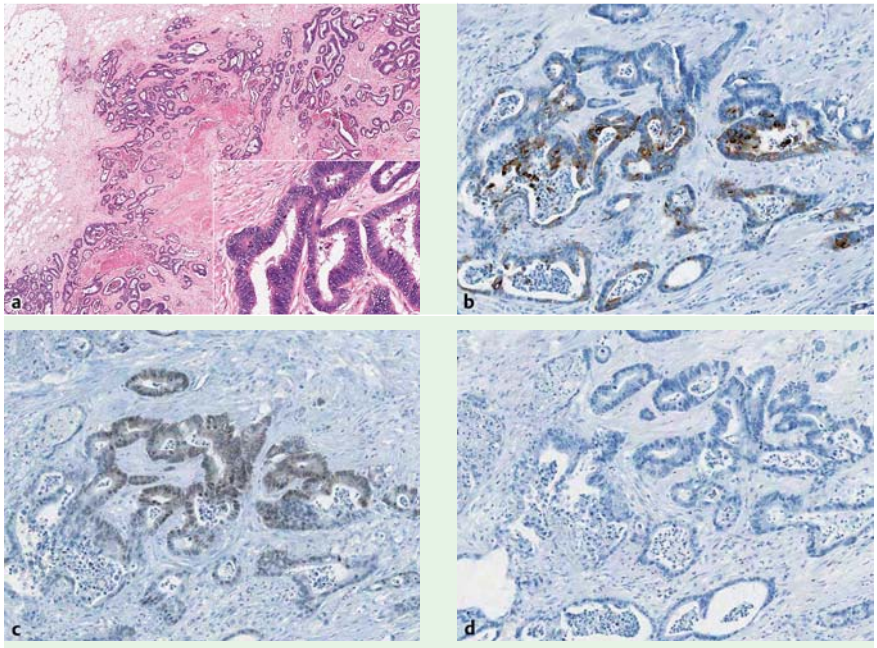

Fig. 3 Microscopic images of the resected lymph nodes showing metastatic adenocarcinoma that is stained: **a** with hematoxylin and eosin (H&E), magnification × 40, insert × 100; **b** positively by immunohistochemistry with CK20, magnification × 100; **c** positively by immunohistochemistry with CDX2, magnification × 100; **d** negatively by immunohistochemistry with CK7, magnification × 100. Therefore, it can be concluded that the origin of the nodal metastatic carcinoma is colon.

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Competing interests: None

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