Squamous cell carcinoma of the sigmoid colon arising on base of a nonpolypoid tubulovillous adenoma

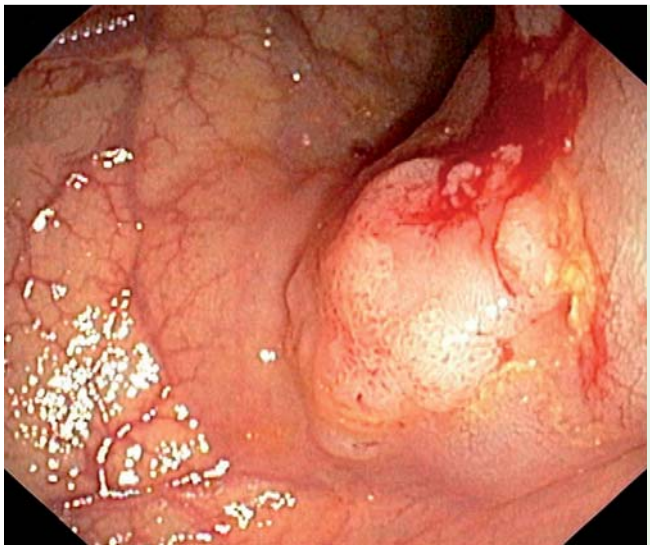

Fig. 1 A 14-mm polyp located in the sigmoid colon, showing a combined Kudo type IV and type V pattern.

Colonoscopy represents the gold standard for screening and surveillance of colorectal polyps [1]. Of note, retrieval of the resected specimen is of paramount importance, as histopathological analysis gives additional information regarding the polyp's entity and the resection status [2].

A 56-year-old woman was referred for screening colonoscopy, which revealed two nonpolypoid lesions in the sigmoid colon, measuring 25 mm and 14 mm, respectively. The smaller polyp had a 5-mm area at the top that showed a Kudo type V pattern (▶ **Fig. 1**). Both polyps were removed using snare polypectomy.

Histology of the smaller polyp showed a tubulovillous adenoma with apical high grade dysplasia and, at the base, an abrupt transition to solid growing nests of squamous epithelium with invasive nests reaching the middle third of the submucosal level (depth of invasion 1.3 mm) (▶ **Fig. 2** and ▶ **Fig. 3**). Neither lymphatic nor blood vessel permeation was observed but a mild budding of tumor cells was apparent (pT1 [sm2], L0, V0, R0, G3). No pre-existing non-neoplastic squamous cell metaplasia was detected. Immunohistochemically, the squamous cell carcinoma was positive for CK5/6, CDX-2, MLH1, MSH2, MSH6, MSH3, PMS2, and MGMT (▶ **Fig. 4**). The tumor was negative for CK 7 and CK20. The adjacent tubulovillous adenoma was positive for CK20 and CDX-2, positive for MLH1, MSH2, MSH6, MSH3, PMS2, and MGMT, but negative for CK7 and CK5/6.

After interdisciplinary evaluation, elective resection of the sigmoid was performed but neither lymph node metastasis nor distant metastases were found.

Squamous cell metaplasia and carcinoma of the colon are extremely rare, reported in only 0.025 % of colorectal neoplasms [3]. Interestingly, despite its low frequency, the entity of squamous cell cancer of the colon has been long known in the literature, and it has been reported to have a poor prognosis, with a mean survival time of 8.5 months at Stage IV [4, 5]. The present case highlights the potential of endoscopic resection techniques to treat early colon cancer [6]. Endoscopists have to be aware that every polyp may hide a specific pathology, which may alter patient therapy and can therefore only be truly diagnosed by subsequent histopathological analysis.

Endoscopy_UCTN_Code_CCL_1AD_2AB

Competing interests: None

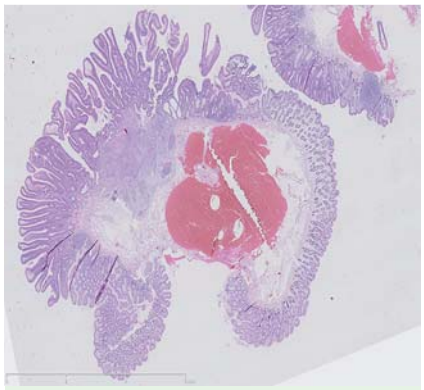

Fig. 2 Hematoxylin and eosin routine stain of complete sigmoid polypectomy, with invasive carcinoma at the 11 o'clock position (× 12.5).

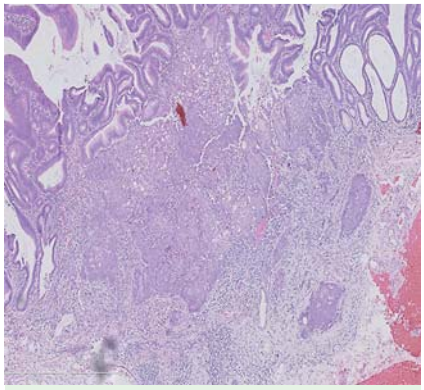

Fig. 3 Higher magnification of ▶ **Fig. 2**, showing invasive squamous cell carcinoma with mild tumor budding and abrupt changes to overlying tubulovillous adenoma (hematoxylin and eosin, × 200).

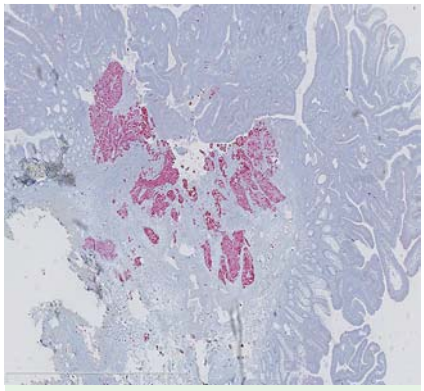

Fig. 4 Immunohistochemical cytokeratin 5/6 reaction showing the abrupt transition to squamous cell carcinoma and tubulovillous adenoma (CK5/6 × 100).

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DOI http://dx.doi.org/10.1055/s-0034-1377493
Endoscopy 2014; 46: E455–E456

ISSN 0013-726X

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