Colonic Abrikossoff tumor: fortuitous discovery at colonoscopy for serrated adenomas polyposis, and resection by endoscopic submucosal dissection

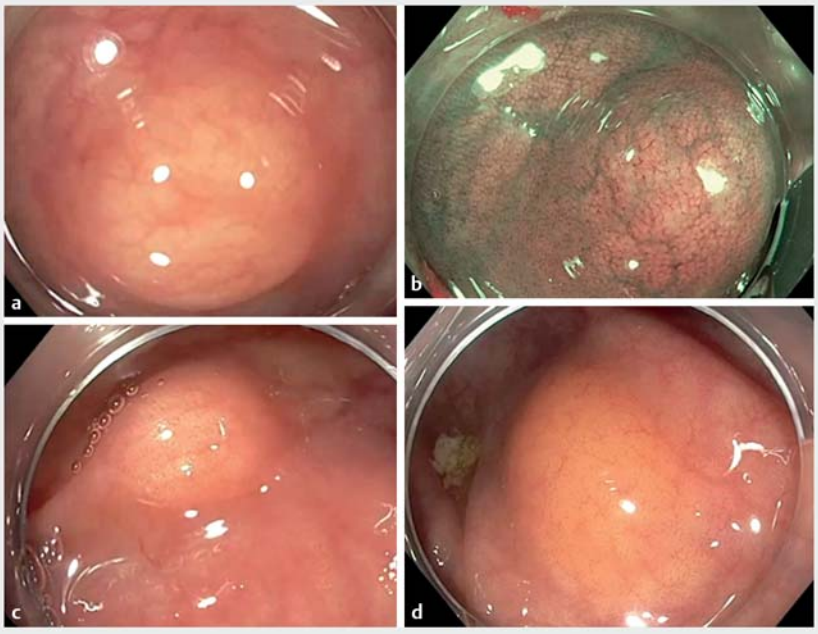
Granular cell tumors (GCTs) are a type of submucosal tumor, with an overall soft tissue tumor incidence of 0.03% [1]. They are benign neural tumors presenting typically in the dermis or subcutis, in adults, and more frequently in women.

Amongst all GCTs, 5%–11% occur in the gastrointestinal (GI) tract. The second most commonly affected GI organ is the colon (20%) and GCTs may be located anywhere in it [2].

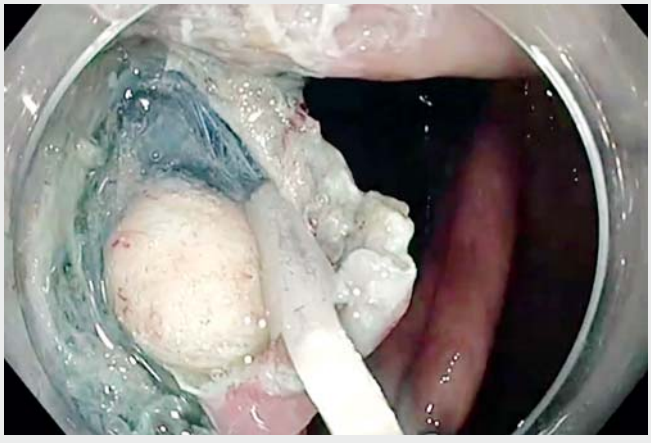
Colonic GCTs typically appear as yellowish firm lesions with intact mucosa but they can also be sessile or pedunculated polyps. Patients may have additional findings on colonoscopy, including adenomas and hyperplasic polyps, which are likely unrelated to the presence of GCTs [3].

We report here the case of a 59-year-old woman who underwent a first colonoscopy for rectal bleeding, which led to a finding of serrated adenomas polyposis. A further colonoscopy was performed that revealed in the right colon, a small, white and yellowish submucosal lesion 5 mm in size (▶ **Fig. 1**). A diagnosis of small neuroendocrine tumor (NET) was initially proposed, and we used a strategy of endoscopic submucosal dissection (ESD) with traction using two clips and a rubber band [4]. Traction allowed the correct exposure of the submucosal lesion (▶ **Video 1**, ▶ **Fig. 2**), and then the resection was en bloc and endoscopically complete.

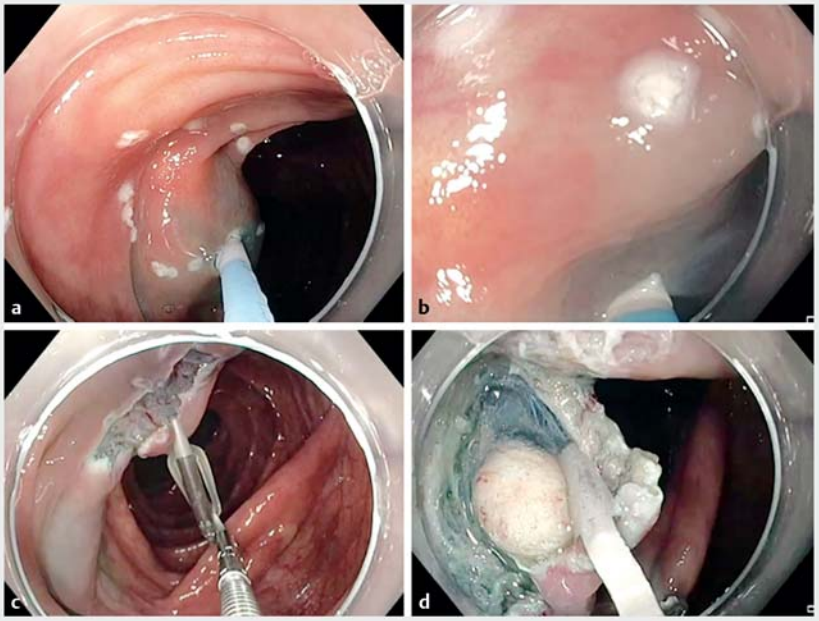
Pathological examination (▶ **Fig. 3**) revealed a well-circumscribed nodular tumor in the colonic submucosa composed of nests of tumor cells divided by slender fibrous septa. Cells were polygonal or spindle with a small nucleus and large eosinophilic cytoplasm with a distinctly granular appearance. These granules correspond to phagolysosomes. Immunohistochemical study showed diffuse S100 protein expression by tumor cells. Resection was complete with free margins (R0).



▶ **Fig. 1** Endoscopic appearances at second colonoscopy in a 59-year-old woman with a finding of serrated adenoma polyposis. **a, c** A granular cell tumor (GCT) in the right colon with white light imaging. **b** Same GCT with narrow band imaging. **d** Differing appearance of a lipoma in the cecum.



Video 1 Endoscopic submucosal dissection (ESD) of a granular cell tumor.



▶ **Fig. 2** Endoscopic submucosal dissection (ESD) of granular cell tumor (GCT) in the right colon: **a** injection; **b** distal incision; **c** traction with double clip; **d** dissection under traction with exposed submucosal tumor.

Granular cell tumors are rare in the GI tract, occurring with differing endoscopic features and difficult to distinguish from NETs. Endoscopic submucosal dissection may allow a complete resection of the lesion to facilitate the pathology analysis.

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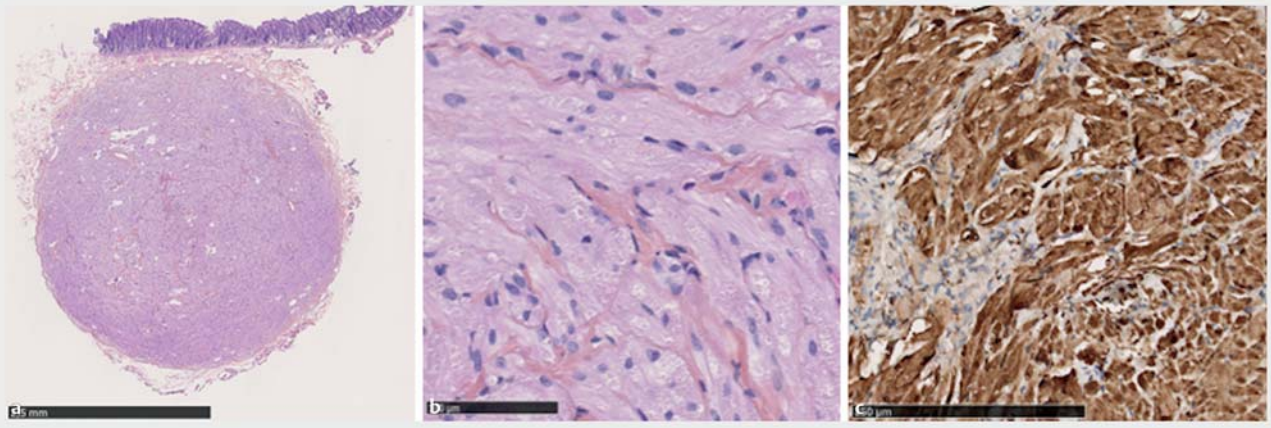
Competing interests

None



▶ **Fig. 3** Pathological examination of granular cell tumor. **a** Nodular tumor in the submucosa of the colon wall (hematoxylin and eosin [H&E] and safranin, original magnification × 1). **b** Tumor cells with large eosinophilic cytoplasm and a distinctly granular appearance (H&E and safranin, original magnification × 25). **c** S100 expression in tumor cells (original magnification × 15).

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