count. The patient recovered rapidly with malaria treatment, and all symptoms and signs resolved within days. The hypothesis behind this case report is that prolonged incubation period, relapse after months or years after the primary infection, coexistence of *P. vivax* and *P. falciparum* with *P. vivax* suppressing *P. falciparum*, and sequestration in gut and visceral ischaemia may cause intense abdominal pain.

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Submucosal xanthochromia after endoscopic mucosal resection: laparotomy or conservative therapy?

A screening colonoscopy was performed on an asymptomatic 68-year-old woman. A diminutive 1 mm diameter Paris-type 0-IIc neoplastic lesion was diagnosed in the ascending colon (fig 1A). Further characterisation using high-magnification chromoscopic colonoscopy and 0.05% crystal violet intravital staining revealed a Kudo-type IIIa crypt architecture in the depressed component, which suggested that this lesion was limited to the mucosal layer. Endoscopic mucosal resection (EMR) was considered to be the most appropriate first-line endoluminal treatment in this case to confirm histologically the absence of neoplastic disease beyond 1000 µm in the vertical margin, where data from both Japan and Europe have shown that despite diminutive endoluminal appearances, such type 0-IIc lesions have an increased potential for local nodal disease (8–10%) in the right colon.^{1,2} Further management—that is, continued endoscopic surveillance or progression to surgical resection—is therefore dependent on the “gold standard” histopathological assessment. Hot biopsy, which is a primarily ablative technique, is unable to provide this mandatory information.

Figure 1 (A) Colonoscopy after application of 0.2% indigo carmine dye showed a diminutive Paris type 0-IIc neoplastic lesion, 1 mm diameter, in the ascending colon. (B) Colonoscopy showed the yellowish substance, which looked like a sponge and was thinner, and less yellowish than adipose tissue in the serosa, floating in the ulcer created by endoscopic mucosal resection.

Figure 2 (A) Colonoscopy showed the yellowish substance, which looked like a sponge and was thinner, and less yellowish than adipose tissue in the serosa, floating in the ulcer created by endoscopic mucosal resection. (B) Macroscopically, the endoscopic picture showed that the muscle layer was not included in the vertical margin of the resected specimen.

The lesion was raised using a submucosal injection of normal saline solution with no evidence of non-lifting or asymmetry, and resected en bloc endoscopically. The patient reported no abdominal pain during the resection. However, a xanthochromic substance mimicking adipose tissue was observed at the vertical resection margin (figs 1B and 2A). This tissue appeared endoscopically distinct from serosal adipose tissue, diagnostic of post-EMR transmural perforation. Furthermore, the muscularis propria was not represented in the resected lesion that histologically revealed a tubular adenoma with moderate atypia only (fig 2B). No free air was present on a chest and abdominal CT. The patient was subsequently managed conservatively without any late adverse outcome.

During EMR, transmural perforation can occur when the muscularis propria becomes entrapped below the vertical cut margin of the snare. Clinically, patients often report transient abdominal pain during resection, and subsequently a definite perforation can be identified endoscopically.³ Furthermore, serosal adipose tissue may be directly visualised after EMR, diagnostic of transmural perforation. However, xanthochromic submucosal adiposity can also be observed after EMR, and although difficult to distinguish endoscopically from serosal fat represents a “normal” submucosal variant,

particularly prominent in the proximal ascending colon and ileocaecal valve (colonic lipohyperplasia).⁴ Given the increased use of EMR for the treatment of Paris type 0-II neoplastic lesions, this case serves to emphasise the importance of normal anatomical variance after resection. Submucosal xanthochromia after EMR should not be confused with the direct visualisation endoscopic appearance of serosal adipose tissue. Differentiation of these two distinct post-EMR appearances is essential to avoid misdiagnosis of perforation leading to unnecessary laparotomy.⁵

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Complete response in a patient with colonic mantle cell lymphoma with multiple lymphomatous polyposis treated with combination chemotherapy using anti-CD20 antibody and cladribine

A 59-year-old woman suspected of having colonic malignant lymphoma was transferred to our hospital (Japan Labour Health and Welfare Organization Tsubame Rosai Hospital, Tsubame, Niigata, Japan) in October 2003. Systemic CT scan showed no swollen lymph nodes. Gallium scintiscan useful in localising lymphoma, showed no abnormal accumulation. Endoscopic findings of the oesophagogastroduodenal tract showed no tumour lesions. Colonoscopic examination was performed in November 2003, and clearly revealed multiple small elevations (fig 1A). Endoscopic mucosal resections were performed on lesions and the resected specimens suggested mantle cell lymphoma (MCL). A second colonoscopic

examination performed in July 2004 revealed increased numbers of polyps, indicating a case of multiple lymphomatous polyposis (MLP). Biopsy was performed again to confirm the diagnosis of colonic MCL. Figure 1B–D shows the histopathological findings of both resected and biopsy specimens. Immunohistochemical examination of these specimens revealed positive immunoreactivity for CD20 and CD5 (fig 1E), and negative immunoreactivity for UCHL-1, CD10 and cyclin-D1. The patient was treated with combination therapy of an anti-CD20 antibody (rituximab) and 2-CdA (cladribine). (570 mg/day of rituximab was given intravenously on day 14 and 5.6 mg/day of cladribine was given intravenously from days 1 to 3.) After two courses of combination therapy, colonoscopic examination revealed that polypoid lesions had disappeared and complete response was obtained. In all, the patient underwent four courses of combination therapy and was then carefully followed up as an outpatient.

In the West, MLP is commonly considered to be a representation of MCL.¹ However, in

Figure 1 (A) Colonoscopic findings on 4 November 2003 showed multiple small elevations with a normal vessel pattern and erosions on the tops, from the ascending to descending colon. (B) A low-power histological picture of the specimen resected at the first colonoscopic examination on 4 November 2003 showing distinct, poorly circumscribed lymphoid follicles and the infiltration of lymphoma cells into the submucosal lesion of the colonic wall. The lesions were covered with normal mucosa (H&E stain). (C) High-power view showing diffuse proliferation of many small centrocyte-like cells (H&E stain). (D) High-power histopathological view of the biopsy specimens taken during the second colonoscopic examination in July 2004 showing lymphoepithelial lesion (H&E stain). (E) Immunohistochemical examination was shown to be positive for CD5.