A Complication of Crohn’s Disease?

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This article has an accompanying continuing medical education activity, also eligible for MOC credit, on page e15 (https://www.gastrojournal.org/cme/home). Learning Objective: Upon completion of this case review, successful learners will be able to understand the pathogenesis and prognosis of squamous cell carcinoma (SCC) of the colorectum.

Question: A 72-year-old woman with a history of iron deficiency anemia and untreated Crohn’s disease presented with a seven month history of abdominal pain and bloody diarrhea. She denied a family history of inflammatory bowel disease, colon cancer or other GI malignancy. Initial labs were notable for hypokalemia with a potassium of 2.9 mmol/L and a microcytic anemia with a hemoglobin of 7.9 g/dL, a hematocrit of 25% and a mean corpuscular volume of 77 fl. Images of her CT scan of the abdomen and pelvis are shown as Figures A and B. Colonoscopy was performed (Figure C). Histology of colon biopsies are presented in Figures D–G.
What is the likely diagnosis?

A. Adenocarcinoma of the colon.
B. Inflammatory polyp of the colon in the setting of untreated Crohn's disease.
C. Squamous cell carcinoma of the colon.
D. Neuroendocrine tumor of the colon.

Look on page 33 for the answer and see the Gastroenterology web site (www.gastrojournal.org) for more information on submitting your favorite image(s) to Practical Teaching Cases.
Answer (Page 31): Squamous Cell Carcinoma of the Colon

The correct answer is C. The diagnosis is primary squamous cell carcinoma (SCC) of the colon, a rare form of colon cancer with a worse prognosis than adenocarcinoma at advanced stages. Figure A is a non-contrast CT identifying a suspected hepatic metastasis (*). Figure B identifies ileocolonic thickening (white arrows). Figure C is the endoscopic image of a circumferential mass involving the cecum and ascending colon. Notably, no fistulas were identified on imaging.

Primary SCC of the colorectum accounts for less than 0.25% of all colorectal cancers and predominantly involves the rectum followed by the right colon.\textsuperscript{1,2} Pathogenesis is not fully understood. One hypothesis is that post infectious or inflammatory bowel disease (IBD)-related inflammation leads to squamous metaplasia and carcinoma. Figure D, biopsy of the mass, shows a tumor composed of eosinophilic polygonal cells with irregular hyperchromatic nuclei and focal keratinization (black arrows) diagnostic of squamous cell carcinoma. Immunohistochemistry (IHC) for p40 and CK 5/6 (Figures E and F), which are specific markers for squamous differentiation, were markedly positive in the tumor (right of the images) but negative in the colonic crypts (left of the images) confirming the diagnosis. Adenocarcinoma and neuroendocrine tumors (NET) do not express CK 5/6 and p40. The role of HPV in SCC of the colorectum is not well defined. High risk HPV (subtypes 16,18) is associated with SCC of the anal canal, head, neck and cervix.\textsuperscript{2} Figure G demonstrates a negative IHC for p16, a surrogate marker for HPV. Our patient met all three diagnostic criteria for primary colorectal SCC as proposed by Williams et al. in 1979 as there was no evidence of a SCC primary tumor in any other organ, the affected bowel was not involved in any squamous-lined fistula tract and the tumor was not an extension of a proximally extending anal SCC.\textsuperscript{3} Presentation and treatment of primary colorectal SCC is similar to adenocarcinoma. Our patient declined treatment.

References