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Ischemic colitis as a rare complication of colonoscopy

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Abstract

We report a 59 year old man with controlled hypertension, diabetes mellitus and irritable bowel syndrome who was visiting surgical clinic for Per-rectal bleeding secondary to piles. He was referred for colonoscopy to rule out any other colonic pathologies. A colonoscopy was done on March 27, 2016 that revealed two small colonic polyps with no other mucosal pathology. Biopsy of one polyps showed tubular adenoma. He started to have abdominal pain the 2nd day post colonoscopy. This pain was dull aching moderate to severe associated with intermittent Per-rectal bleeding. The pain was attributed to Irritable Bowel syndrome (although this pain was different from the pain he used to have before) and the Per-rectal bleeding was attributed to piles. Despite the fact that he was operated for piles three weeks later, he continued to complain of abdominal pain with recurrent visits to Emergency room and out-patients clinic. A repeat colonoscopy was done three weeks post operation to assess the cause for the continued abdominal pain and the Per-rectal bleeding. The second colonoscopy showed severe colitis involving upper sigmoid, descending colon and distal transverse with sloughed mucosa and black spots. The histology was consistent with ischemic colitis. He had chronic course with pain required recurrent admissions with conservative treatment, he refused surgical intervention. He improved very slowly. A third colonoscopy with biopsy after 19 months showed completely normal mucosa with normal histology. This case represents a rare cause of ischemic colitis precipitated by colonoscopy. The clinician should be aware of such scenario if patient continues to have unexplained abdominal pain post colonoscopy. There are few cases reported in the literature. No reported case from the kingdom.

Ischemic colitis is the most common form of intestinal ischemia. Although the incidence of ischemic colitis is increased in the elderly and among those with many with risk factors for vascular disease, an index lesion on angiography is unusual. When present, abnormalities may include the narrowing of the small vessels and tortuosity of the long colic arteries. Rather than a specific vascular lesion, there appears to be an acute, self-limited compromise in intestinal blood flow, which is inadequate for meeting the metabolic demands of the colon. The colon is predisposed to ischemia by its relatively low blood flow compared with the rest of the gastrointestinal tract. Experimental distension has been found to increase intraluminal pressure, reduce total blood and reduce the arteriovenous oxygen gradient in the colonic wall. This most likely resembles the mechanism for the rare occurrence of ischemic colitis during colonoscopy or barium enema. There are numerous conditions that predispose patients to ischemic colitis. The most common mechanism is hypotension from sepsis or impaired left ventricular function and hypovolemia from dehydration or hemorrhage, producing a compromise in systemic perfusion and triggering a reflex mesenteric vasoconstriction. Numerous medications may produce colonic ischemia by a similar mechanism. The most common drugs are antihypertensive agents, diuretics, non-steroidal anti-inflammatory drugs, digoxin, oral contraceptives, pseudoephedrine, cocaine and alosetron. Predisposing factors for colonic ischemia in young adults include vasculitis, abdominal surgery, use of cocaine, oral contraceptive pills and nonsteroidal anti-inflammatory drugs, hypercoagulable states, colonic obstruction and marathon running. None of these risk factors were present in our cases.Most patients present with the acute onset of mild, crampy abdominal pain and tenderness over the affected bowel. Within 24 h, there is usually passage of bright red or maroon blood often mixed with stool. Usually blood loss is minimal, without hemodynamic deterioration or the need for transfusion.

Any part of the colon may be affected, but (different pont size) the left colon is the predominant location in approximately 75% of patients. Splenic flexure may be the most common site, as it is involved in one-quarter of patients[10], and isolated right colon ischemia occurs in approximately 10% of cases. Because the rectosigmoid junction and splenic flexure may be vulnerable in systemic low-flow states due to the watershed area called Sudeck's point, where the sigmoidal artery meets the superior colic artery, and Griffith's point, where the mid-colic artery meets the left colic artery. In our two cases, right colon ischemia developed. This incidence may be explained by the potentially increased vulnerability of the right colon to a systemic low-flow state, as the marginal artery of Drummond is poorly developed at this location in 50% of the population.The diagnosis of ischemic colitis depends on characteristic findings in the appropriate clinical setting. Laboratory markers for ischemia, such as serum lactate, lactate dehydrogenase, alkaline

phosphatase and metabolic acidosis, may be present, but they are uncommon. Plain abdominal films are insensitive and nonspecific, but they are important when excluding other disorders. A barium enema may show findings suggestive of ischemic colitis, such as thumbprinting, but this procedure is nonspecific and is present in many other infective or inflammatory colitis. Abdominal computed tomography may show suggestive findings of ischemic colitis in up to 89% of patients. The most common finding is segmental circumferential wall thickening of affected colon.Colonoscopy has largely supplanted the barium enema as the diagnostic modality of choice because of its higher sensitivity for detecting mucosal changes and its ability to obtain biopsy specimens if necessary.

However, as there are no specific endoscopic findings for ischemic colitis, the clinical situations must be considered. Findings that favor ischemic colitis rather than inflammatory bowel disease are in segmental areas of injury, abrupt transition between normal and affected mucosa, rectal sparing and rapid resolution of mucosal changes on serial colonoscopy. Treatment varies with the severity of the ischemia. In the absence of gangrene or perforation, supportive care is sufficient. Patients need bowel rest, intravenous fluid and often empirical broad-spectrum antibiotics to minimize bacterial translocation and sepsis.

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