

Ischemic Colitis After a Routine Colonoscopy: Case Reports

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Abstract

Objective: Ischemic colitis after colonoscopy is a rare event. We will report two patients who had this evolution.

Case 1: Female patient, 67 years old, compensated COPD, underwent colonoscopy for colorectal cancer CRC prevention. There was a report of previous pelvic surgery, the colon preparation was good, the physiological parameters remained NORMAL throughout the procedure, which was long, difficult and with great gas distension. Six hours after hospital discharge she presented with anal bleeding followed by abdominal pain and distension. Abdomen was flaccid with left lower quadrant tenderness on deep palpation. Abdominal CT scanning showed thickening of the rectum and sigmoid with blood in it. Under conservative treatment she became asymptomatic in 5 days.

Case 2: A 82 year old white female with an adenocarcinoma of the sigmoid colon was submitted to a colonoscopy to rule out a synchronous tumor. We performed an endoscopic mucosal resection for a benign lesion of the cecum. A tattoo close to a sigmoid tumor was done to facilitate surgery. The procedure was uneventful and she was discharged without complaints. Three hours later she was distressed with abdominal distension and pain. The abdomen was soft and the bowel sounds were hyperactive. She underwent a routine chest and abdominal X ray that disclosed only hyper-distension and no free air. Twenty hours later she got worse with clinical signs of peritonitis. Right hemicolectomy was performed for ischemic colitis.

Conclusion: We describe an Ischemic colitis following an uneventful colonoscopies. Both patients had reduced blood flow with damage to microvasculature probably due to a high intra luminal pressure related to hyperinflation. On the first case the cause was the long procedure time and in the second a partial colonic obstruction due to a sigmoid tumor. As a risk factor we found only a previous abdominal surgery on the first case. It is important to pay attention to a colonoscopic procedure time, hyperinflation and hyperextension.

Keywords: Ischemia, Colon, Colonoscopy

Introduction

Ischemic colitis is more common in old age, being related to risk factors, such as hypovolemia, low output syndrome in cardiac arrhythmia, vascular lesions, both large and small vessels, vascular surgery, use of certain medications, use of illicit drugs, some hematological diseases and possibly complication of intestinal obstruction [1-7]. This publication aims to report two cases of ischemic colitis that occurred after colonoscopy without apparent complication.

Case Report

Case 1: HP, 67 years old, female, white, with compensated chronic obstructive pulmonary disease. She underwent colonoscopy to prevent colorectal cancer (CRC), having good colon preparation and a history of previous pelvic surgery. Vital signs kept normal throughout the procedure performed under venous sedation with an anesthetist. Difficult, time-consuming examination performed with large amount of air insufflation. There was no additional procedure. She was discharged from the hospital without complaints, but 6 hours later, she started with bleeding from the anus followed by abdominal pain more intense in the left lower quadrant of the abdomen. Abdominal CT scanning showed diffuse wall thickening of the rectum and sigmoid with blood in it.

The abdomen remained flaccid, slightly distended, with peristalsis present and without clinical signs of pneumoperitoneum. Abdominal CT showed diffuse thickening of the rectum and sigmoid wall, with blood inside. There was no liquid or free gas. C-reactive protein was high and the blood count was normal. Under conservative treatment, symptoms were resolved in 5 days (Figure 1 and 2).



Figure 1: Shows abdominal and pelvic CT, showing thickening of the rectum and sigmoid wall in addition to blood inside.



Figure 2: Shows colonoscopy showing normal rectum, sigmoid and transverse colon in examination performed on the previous day.

Case 2: JS, 82 years old, female, white, with previous diagnosis of sigmoid adenocarcinoma, underwent colonoscopy to track synchronous lesion. Mucosectomy of Lateral Spreading tumor (tubular adenoma)located in cecum was performed without eventuality, followed by

tattooing ink in sigmoid segment, above and below, the tumor to be operated. Colonoscopy was completed without difficulty, but 3 hours later she presented abdominal pain and gas distension with high-pitched sounds on abdominal auscultation. Radiological routine for acute abdomen showed great colonic distension with a pattern suggestive of sigmoid subocclusion, without other particularities. The patient was then admitted to the hospital and, approximately 20 hours later, she developed a frankly acute abdomen with clinical signs of peritoneal irritation. Right hemicolectomy was performed and the diagnosis was ischemic colitis (Figure 3 and 4).



Figure 3: Shows the performance of a flat tubular adenoma mucosectomy in the cecum.

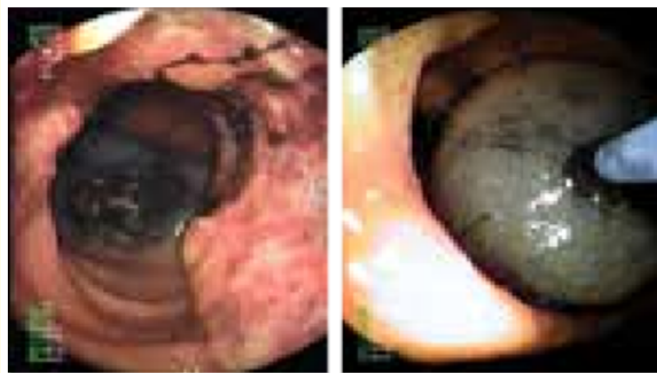


Figure 4: Shows sigmoid adenocarcinoma and inking with ink next to the lesion.

Discussion

Evolution to ischemic colitis after colonoscopy without event is a rare complication and in our experience it was only observed in 2 patients, in more than 15000 colonoscopies performed. The first patient had colonoscopy performed for CRC screening as an indication and, as an important fact, the difficulty in performing the procedure, prolonged time and the presence of a large amount of undrained air at the end of the exam. The evolution took place without major problems with conservative treatment, with clinical support.

The second patient was 15 years older than the first, had an easier examination at the usual time. However, the indication was search of synchronous tumor as a pre-operative for resection of sigmoid adenocarcinoma. In this exam, we performed a mucosectomy of a flat adenoma located in the cecum and a tattoo with ink above and below the sigmoid tumor. About 3 hours later she complained of pain, had

great abdominal distention and evident signs of sigmoid subocclusion, confirmed by radiological image. She was admitted to the hospital and started conservative treatment without, however, having left a large caliber catheter anchored above the primary neoplastic lesion, for the purpose of decompression. It is important to note that we use air insufflation instead of Carbon dioxide.

In this scenario, in an elderly patient with comorbidities, progression to ischemia with necrosis, secondary to vascular compression, both venous and arterial, in view of the large distension of the undrained colon, provided an ischemic outcome after 23 hours after the end of the procedure.

In October 2013, at the Annual Scientific Meeting and Post-graduate Course of the American College of Gastroenterology, Dr. Lawrence J Brandt gave a lecture entitled: Ischemic colitis: What is new?, citing, as one of the causes, gas distension after colonoscopy difficult, with evolution to ischemia. It is interesting to mention that our first patient had a colonoscopy with me 4 days before my departure to Congress above. Although he had no label for the disease, only noticed after Dr. Brandt's lecture.

By strange coincidence, and it is customary to say that the diseases appear in pairs, we had a second case, which occurred a few months after our return from Congress, motivating our presentation as a Poster at the 2014 ACG Meeting in Philadelphia [8], that is, in next year. Probably the sigmoid tumor prevented the elimination of trapped air during colonoscopy leaving the path for the ensuing complications. A few years ago we saw the successful use of the under water colonoscopy technique [9-12] for potentially difficult cases, such as incomplete examinations by other examiners, long and redundant colon, such as that of the virtual colonist photo (Figure 5). We also use it when we notice important distension associated with the difficulty, in an exam done by a less experienced colleague who asks for help, or a resident with difficulty completing the procedure. In this scenario, we try to remove as much air, undo the loops and exchange the air for water or saline. The preference is for water, but in this option we need an injection pump. In the two cases presented here, we did not exchange air for water. In the first exam, we considered this a failure; in the second, the problem was the lack of decompression when we noticed the distension with sub-occlusion after the procedure.

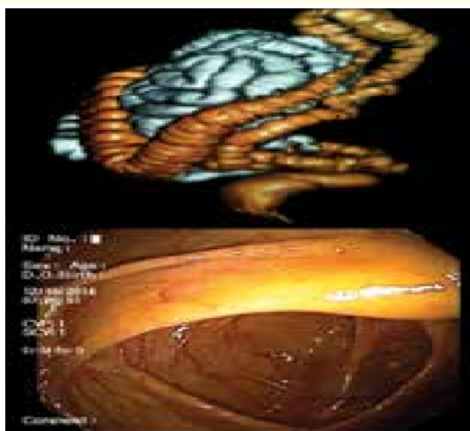


Figure 5: Incomplete colonoscopy in another hospital and complete with us by the technique of replacing air with water.

Conclusion

Ischemic colitis may occur after colonoscopy and the perfect scenario for this evolution is a difficult, time-consuming examination with great gas distension. To avoid it, at the end of the examination, the patient must have the least amount of possible gas quantity. As a criti-

cism of this report. we mention that there will probably be a greater number of ischemic episodes, which, as in the first patient, evolved without sequelae and even without diagnosis in the first instance. Research protocol based on this report would be welcome. Furthermore, we emphasize that there is no statistical validity in the material presented here.

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