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EDİTÖRE MEKTUP / LETTER TO THE EDITOR

Intestinal ischemia in a young male with a history of foreign drug abuse

Yabancı madde bağımlısı genç hastada gelişen intestinal iskemi

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Dear Editor,

Mesenteric ischemia is generally encountered in elder ages, but can be also seen in young population [1]. Occlusive and nonocclusive entities broadly underlie the etiology. Although the complications of drug abuse usually occur much in cardiovascular or respiratory systems than gastrointestinal [2], a part of gastrointestinal tract can be affected with the use of foreign drugs such as cocaine, marijuana and spice. Herein, we aimed to present a case of intestinal ischemia related to drug abuse in a patient with history of colon cancer surgery.

A 30-year-old man presented to the emergency department with a 6 hours of history of severe crampy abdominal pain. He reported to have undergone laparoscopic anterior resection with the diagnosis of sigmoid colon cancer 6 months ago and have taken adjuvant chemotherapy. In his past medical history, he frequently smoked cigarettes and used alcohol and various kinds of foreign drugs such as cocaine, marijuana and spice. Before the beginning a sudden attack of abdominal pain, he admitted to use these drugs.

His abdominal assessment showed hypoactive bowel sounds and moderate tenderness in right quadrants with no rigidity on palpation. No palpable masses were present. Rectal examination showed an empty rectum with no blood. Laboratory findings were as follows: a white blood cell (WBC) count of 16.4 × 103/µl with 90% neutrophils, 49% levels of hematocrit and lactate dehydrogenase (LDH) levels of 370 U/lt (0-3). The other biochemical laboratory tests and urinary analysis were within normal range. A nonspecific gas pattern was seen at the abdominal radiographs. Abdominal USG revealed bowel wall edema, increased wall thickness and findings consistent with ileus. Abdominal CT scanning with intravenous contrast demonstrated dilated small bowels with 35 mm in diameter floating in widespread free abdominal fluid and suspicious filling defect in superior mesenteric vein (Figure 1A, B), but the remainder of the intestine was unaffected. Later, the patient was admitted to the intensive care unit with the diagnosis of ileus, and was given fluid resuscitation. After conservative treatment, his abdominal pain did not resolve.

Considering abdominal pain disproportionate to physical findings and history of foreign drug abuse, the patient underwent emergency surgery with the suspicion of intestinal ischemia. Large amount of free serous fluid and necrotic changes of small bowel between 160 cm distal to Treitz ligament and up to 10 cm proximal to ileocecal valve were observed (Figure 2). Further exploration revealed any internal hernia but a few simple brids. Resection of massively nonviable small bowel segments was performed, and an intestinal anastomosis was constructed with an end-to-end stapling device. Pathological examination of resected bowel showed thinned small bowel walls with thrombotic occlusion of the intestinal vessels, edema and congestion and incidentally serosal implants with each of 0.3 and 0.5 cm in diameter including two different focuses. The patient had an uncomplicated recovery. The patient was discharged on the seventh postoperative day without morbidity. After operation, a short bowel syndrome and diarrhea developed without TPN requirement. At the exploration, no recurrence or other pathological

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appearance related the previous surgery due to colon malignancy was detected. In addition, the current mesenteric vascular pathology of the patient was regarded as colon malignancy independent disease. No pathological findings were found in the tomography and PET examinations performed at 6 months postoperatively. The patient was found not to lose weight.

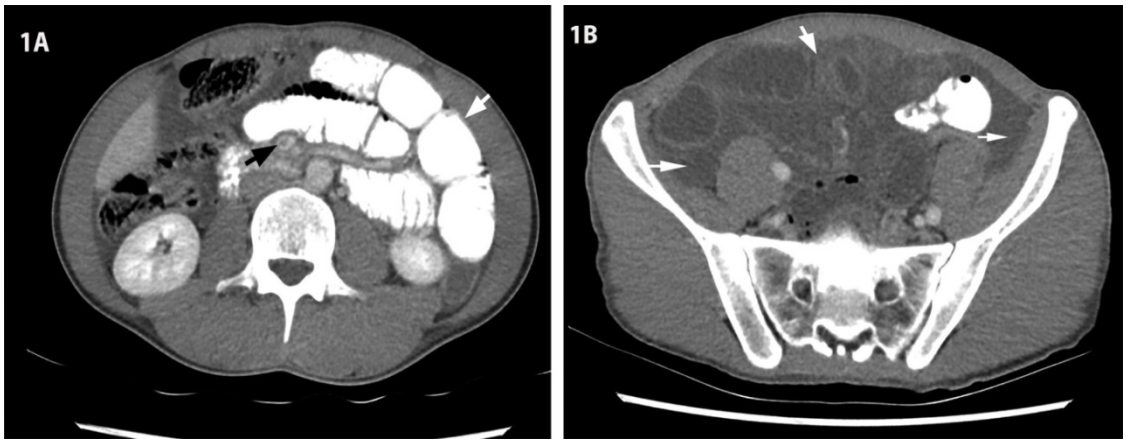

Figure 1. Abdominal CT scanning with intravenous contrast demonstrated suspicious filling defect in superior mesenteric vein (black arrow) and dilated small bowels with 35 mm in diameter (A), widespread free abdominal fluid (white arrow) (B).

Cocaine is one of the best known addictive drugs that can cause mesenteric ischemia, but rare ischemic events secondarily to other drugs have been reported [3].

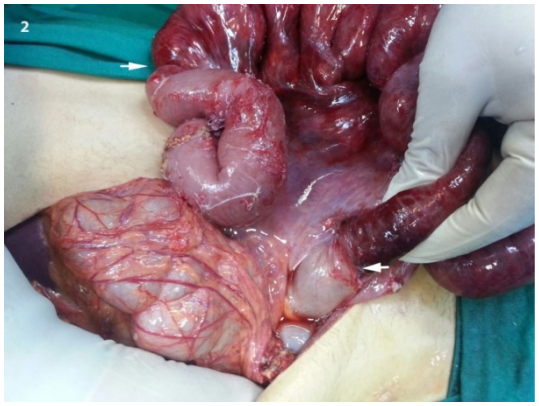

Figure 2. Intraoperative view of the necrotic changes of small bowel between 160 cm distal to Treitz ligament and up to 10 cm proximal to ileocecal valve (white arrows).

However, it is hard to show a direct potential relationship between addictive drug use and bowel ischaemia. Generally, these patients are at younger ages, with no previous history of arteriosclerosis, and had a positive urine toxicology screen [4]. In this case, the patient himself claimed that he was a drug abuser.

Cocaine causes intense vasoconstriction through stimulation of receptors on ileum and colon vessels resulting in ischaemia. It has been reported that cocaine also has a direct constrictive effect on vessels [5]. Similarly, It has been reported that synthetic cannabinoids caused an ischemic stomach by emergency upper gastrointestinal endoscopy [3]. Deusch et al demonstrated that tetrahydrocannabinol activates platelets as determined by enhanced glycoprotein IIb-IIIa and P-selectin expression [6]. In the present case, cocaine use was thought to be the probable cause and synthetic cannabinoid might have been a contributory factor.

Small bowel ischemia develops in the majority of cocaine abusers. Especially, the distal ileum is mostly affected. Most of the cases require surgical resection of the gangrenous bowel [4]. In this case, the patient underwent emergency surgery with resection of massive small bowel. Wattoo et al. [7] reported in a review that two thirds of patients survived from cocaine-induced intestinal ischemia and most of

them required surgery. In the event of peritonitis, gastrointestinal viscus perforation, or profound leukocytosis, exploratory laparotomy could be required[8]. Despite of massive resection of nonviable small bowel segments, this patient survived.

Mesenteric ischemia should be kept in mind in the differential diagnosis of acute abdominal pain in drug abusers. In cases of small bowel involvement, exploratory laparotomy and resection of involved intestine can be required. Physicians should be vigilant for possible gastrointestinal complications of drug abusers who presents with severe abdominal pain to emergency department.

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