



Rare Isolated Necrosis of the Cecum

Tayfun Kaya, Fuat Ipekci, Mustafa Emiroglu, Baris Turker, Emre Turgut

Tepecik Eğitim ve Araştırma Hastanesi, Genel Cerrahi Kliniği, İzmir, Türkiye

Abstract

In this study, we aimed to investigate the properties of events of isolated cecal necrosis related with diverticulum, the difficulties of diagnosis and the risk factors. In physical examination of a male patient presented to the emergency department of Tepecik Training and Research Hospital with right lower quadrant abdominal pain, the findings were evaluated as acute abdomen. The patient had chronic renal failure, chronic low blood pressure, ischemic heart failure, acromegaly and diabetes mellitus, and he was operated urgently. Isolated cecal necrosis was observed peroperatively. Right hemicolectomy and ileocolic anastomosis was performed as a surgical procedure. He was followed up in the intensive care unit postoperatively with active fluid - electrolyte resuscitation and appropriate antibiotherapy. The patient with various comorbidities died fifteen day after surgery. Isolated cecum necrosis should be considered in the differential diagnosis of elderly patients and patients with comorbid disease presenting with acute abdomen. Physical examination findings of right lower quadrant abdominal pain could be misdiagnosed as acute appendicitis.

Keywords: Hypotension, cecum necrosis, appendicitis

(Rec.Date: Dec 29, 2015

Accept Date: Jan 25, 2016)

Corresponding Author: Tayfun Kaya, Tepecik Eğitim ve Araştırma Hastanesi, Genel Cerrahi Kliniği, İzmir, Turkey

E-mail: kayatayfun@yahoo.com

Introduction

Ischemic colitis is a common emergency condition among the elderly. Particularly cardiac and vascular, detecting the concomitant disease would facilitate the onset points of the disease. Low blood flow situations such as atherosclerosis and shock present a risk factor for the ischemia of right column [1]. Though ischemic colitis is a common condition in the elderly, isolated cecal necrosis is rare and there are few cases having as yet been reported in the literature [2]. Causing right lower quadrant pain, its diagnosis is often difficult in preoperative period particularly due to its being mistaken for appendicitis. Time lag to diagnosis may lead to perforation of cecal necrosis, formation of generalized peritonitis, morbidity and mortality with the contribution of comorbid diseases.

In this study, we aimed to investigate the diagnostic difficulties, characteristics and risk factors of isolated cecal necrosis cases presented to our emergency department.

Case

In December 2013, a seventy-year-old male was admitted to the emergency department in Izmir Tepecik Training and Research Hospital with the complaint of severe abdominal pain having started one day prior to the admission date. In his anamnesis, abdominal pain with increasing severity from the beginning and nausea were identified. Chronic renal failure, chronic low blood pressure, ischemic heart disease, acromegaly and diabetes mellitus (DM) were also present in his history. It was learned that the patient had received hemodialysis before the onset of pain. In his physical examination; he was present with right lower quadrant abdominal tenderness, rebound and defense. Arterial blood pressure was 70/40 mmHg. In the laboratory examination; leukocyte was found as 16300 K/uL, fasting blood glucose as 180 mg/dl, urea 108 mg/dl and creatinine was 7.1 mg/dl. There were no specific findings observed on direct abdominal X-ray. He was seen to be present with free fluid around the cecum. In abdominal ultrasound (US) and abdominal computed tomography (CT), cecal wall thickening, increased density and suspected malignancy in surrounding mesenteric fat tissue, which could be secondary to inflammation, were also observed. Preoperative internal consultation and systemic support were provided. The patient was operated urgently due to acute abdomen.

In the abdominal exploration, isolated intestinal wall necrosis in antimesenteric wall was found in an area covering approximately 4 cm in size (Figure 1). Appendix was found to be normal. Right hemicolectomy and ileocolic anastomosis were performed (Figure 2). A silicone drain was placed into the pelvis. The patient was followed in intensive care due to postoperative cardiovascular instability. Intravenous antibiotic (cefazolin 3x1 g) and low molecular weight heparin were started for the patient. In his pathology, there was an apparent thinning of the cecal wall in muscularis propria and transmural cecal necrosis was reported in the area. During the patient's surgical survey intestinal voices were started to hear in the postoperative second day, defecation was observed in postoperative fifth day and we did not encounter any sign related to re-necrosis. There was only minimal serous fluid drainage in the drains. During the time in intensive care, internal medicine, nephrology, cardiology and anesthesia consultations were provided throughout the postoperative period. The patient passed away on the fifteenth postoperative day of intense systemic support due to decompensated heart failure and chronic diseases.

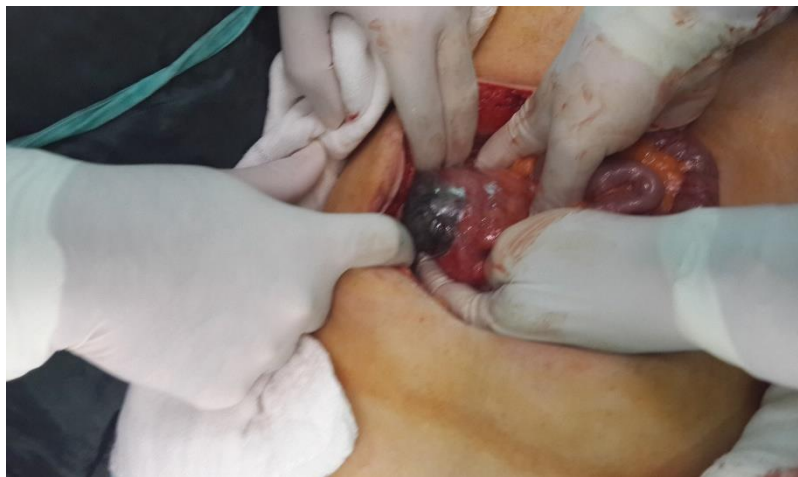


Figure 1. The intraoperative view of the isolated cecal necrosis.



Figure 2. Right hemicolectomy specimen.

Discussion

Colonic ischemia is an important cause of morbidity and mortality in elderly patients. Occlusive colonic ischemia can be encountered due to thromboembolism, venous occlusion atherosclerosis and mechanical bowel obstruction, Due to some conditions like shock in which low blood flow state occurs and mesenteric vasoconstriction, non occlusive ischemia might occur [3]. In our case, we believe that cecal necrosis developed as a result of patient's hypotension. Because situations like open-heart surgeries, chronic heart disease, certain medications and dialysis, low blood pressure-related mesenteric blood flow fall and might predispose to the development of colonic ischemia.

Development of dialysis-related hypotension increases the risk particularly due to excessive liquid withdrawal. In patients with such additional diseases, risk of developing ischemia is, therefore, high [4]. Chronic renal failure, chronic hypotension and the fact that the patient had received hemodialysis prior to the onset of pain were assessed to be the risk factors predisposing this result in terms of colonic ischemia.

In case of colonic ischemia, patients generally present to emergency room with the complaint of common abdominal pain. Isolated cecal necrosis is what is typically characterized with right lower quadrant pain and therefore is reported to be quite highly confused with acute appendicitis [5]. The initial symptom for this patient was right lower quadrant pain and was reported to have started within 24 hours after hemodialysis began. He developed nausea accompanying to the pain. Preliminary diagnosis was considered as acute appendicitis.

Isolated cecal necrosis is a rare type of colonic ischemia and therefore its diagnosis is hard. Its differential diagnosis in physical examination is quite difficult. Conditions like presence of cecum tumors, cecal diverticulum, perforation and especially acute appendicitis may reveal the similar findings. Moreover, there is not a specific serum marker to be used in cecal necrosis. Abdominal ultrasonography and abdominal CT with contrast are reported to be the proper use both in diagnosis and differential diagnosis [6]. Once abdominal CT scan was done, no evidence specific to cecal necrosis was detected in our case. Colonoscopy is known to have a limited place in emergency situations. No colonoscopy was done for this patient. As there was not a specific symptom and acute abdomen symptoms were present, midline incision was preferred. Isolated cecal resection, right hemicolectomy and ileocolic anastomosis can be applied during its treatment. As referred, ileocolostomy can also be applied in case of perforation [6]. Since the patient was not present with perforation, right hemicolectomy and ileocolic anastomosis were applied.

During differential diagnosis, cecal necrosis must be considered in elderly patients with comorbid diseases having been admitted with the complaint of acute abdomen. Physical examination findings in the right lower quadrant might be confused with acute appendicitis; therefore, particularly a well recorded anamnesis in elderly patients becomes even more important for diagnosis.

References

1. Beck DE, de Aguilar-Nascimento JE. Surgical management and outcome in acute ischemic colitis. *Ochsner J.* 2011;11(3):282-5.
2. Dirican A, Unal B, Bassulu N, Tatlı F, Aydın C, Kayaalp C. Isolated cecal necrosis mimicking acute appendicitis: a case series. *J Med Case Rep.* 2009;3:7443.
3. Gundes E, Kucukkartallar T, Çolak MH, Cakir M, Aksoy F. Ischemic Necrosis of the Cecum: A Single Center Experience. *Korean J Gastroenterol.* 2013;61(5):265-9.
4. Friedell ML. Cecal necrosis in the dialysis-dependent patient. *Am Surg.* 1985;51(11):621-2.
5. Çakar E, Ersöz F, Bag M, Bayrak S, Çolak Ş, Bektaş H, Güneş ME, Çakar E. Isolated cecal necrosis: our surgical experience and a review of the literature. *Ulusal Cer Derg.* 2014;30(4):214-8.
6. Schuler JG, Margaret M, Hudlin MM. Cecal necrosis: Infrequent variant of ischemic colitis. *Dis Colon Rectum.* 2000;43(5):708-12.