



Case Report

A Rare Cause of Acute Abdomen: Thrombosis in the Ileocolic Branch of the Superior Mesenteric Vein

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Abstract

Superior mesenteric vein thrombosis is a rare cause of acute abdomen. Patients usually complain of non-specific abdominal pain, which may show progress with secondary complaints, such as nausea, vomiting, and hematochezia. Mesenteric vein thrombosis has a mortality rate of 15% to 40%; early diagnosis plays an important role in treatment. An 80-year-old male patient presented at the Near East University emergency department with complaints of fever and abdominal pain, underwent contrast-enhanced abdominal computed tomography, and was diagnosed with thrombosis in the ileocolic branch of the superior mesenteric vein. The complaints were treated with low molecular weight heparin (LMWH), and surgical intervention was not necessary.

Keywords: Acute abdomen, low molecular weight heparin, superior mesenteric vein thrombosis

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Mesenteric vein thrombosis (MVT) is a rare cause of acute abdomen. It is evaluated as a primary MVT whose etiology cannot be determined and secondary MVT caused by a predisposing factor. Predisposing factors include infection which leads to hypercoagulability; abdominal surgery; deficiency of protein C, protein S, and antithrombin III; factor V Leiden mutation; presence of lupus anticoagulant; antiphospholipid syndrome; and malignancy. The disease commences with non-specific progressive abdominal pain and it might worsen with advancement of ischemia along with nausea, vomiting, and bloody diarrhea and finally, it might lead to sepsis. MVT has high mortality rates if left untreated. This study discusses a case in which the patient presented to the emergency department with complaints of abdominal pain and fever, computed tomography (CT) revealed thrombosis in the ileocolic branch of the superior mesenteric vein, and the complaints completely improved after LMWH treatment.

Case Report

An 80-year-old man presented to the emergency department complaining of progressive, worsening abdominal pain for 3 days and fever, which began on that morning. His vital signs were as follows: blood pressure, 110/65 mm Hg; heart rate, 110/min; and body temperature, 38.8°C. His physical examination revealed tenderness in right lower quadrant of the abdomen with palpation and no guarding or rebound tenderness. According to laboratory studies, his WBC was 13700/mm³; CRP levels were 17 mg/dl; and kidney function, liver enzymes tests, and blood electrolytes were evaluated to be normal. There was no significant finding on erect AXR and abdominal ultrasonography. Therefore, contrast-enhanced abdominal CT was required, and a thrombus in the ileocolic branch of the superior mesenteric vein and inflammation in the surrounding fatty mesenteric tissue were observed (Fig. 1). There were no sup-

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Figure 1. Contrast-enhanced coronal computed tomography.

porting findings for an ischemia in the intestines and colon. As a result, medical treatment was decided based on the advanced age of the patient and that the thrombus was located only in the ileocolic branch of the superior mesenteric vein. LMWH (enoxaparin) treatment was initiated, and oral intake of food by the patient was stopped and sufficient fluid intake was provided. In etiological evaluations due to high fever there was not any focus of fever. On the 2nd day of LMWH and piperacillin/tazobactam treatment, abdominal pain and abdominal tenderness on physical examination were decreased. On the 4th day of antibiotic treatment, fever reduced to a normal temperature. Further etiological investigations could not be done as the patient wished to be discharged. No active gastroenterological complaints have been observed during the patients follow-ups in the outpatient clinic.

Discussion

AMVT is a clinical entity which causes signs and symptoms of impaired intestine perfusion because of thrombus that leads to ischemia and necrosis of the tissue. It is defined as primary MVT if the patient presents with predisposing factors and there are not any secondary diseases. MVT is the cause of acute mesenteric ischemia in 15%–20% cases. Thrombosis in the isolated ileocolic branch of the mesenteric vein is extremely rare. Venous thrombosis has a better prognosis than arterial occlusion. Secondary MVT can be caused by trauma, pregnancy, pancreatitis, abdominal sur-

gical history, genetic mutations leading to thrombophilia, oral contraceptive usage, malignancies, and chronic kidney failure.^[1]

Diagnosis of the disease is usually delayed; therefore, complications increase. High mortality rates of MVT may be related with this delay. Therefore, after a detailed anamnesis and physical examination, in case of a clinical suspicion, a contrast-enhanced CT should be considered as the first line. The disease usually occurs with worsening abdominal pain and tenderness of the abdominal region. A typical characteristic of pain is its progressive nature. The average diagnosis time of MVT from the beginning of the pain is 6.8 days. In our case, MVT was diagnosed 52 h after the beginning of pain. Although every patient has a complaint of pain, nausea and vomiting (45%), fever (37%), hematochezia (23%), and hematemesis (16%) may also be observed. Abdominal tenderness (80%) and signs of peritonitis can be observed on physical examination. Leukocytosis and increased CRP and D-Dimer levels can be observed on laboratory findings.^[2, 3] The most important diagnostic method is CT. Although CT angiography is the most specific method for diagnosing MTV, contrast-enhanced CT is advantageous for differential diagnosis. The sensitivity of CT in diagnosing MVT is 100% for acute thrombosis and 93% for chronic thrombosis.^[4]

The most important step of MVT treatment is early diagnosis and administration of the treatment. Treatment choices include heparinization, thrombolytic therapy, hydration, antibiotherapy, surgical embolectomy, and resection of the bowel. All of these treatment options can be applied if necessary. Treatment should be modified according to ischemia and necrosis levels of the tissue with respect to the duration of the thrombosis. Although heparinization can be adequate for patients with an early diagnosis, wide surgical resection of the intestines may be necessary in patients with delayed diagnosis.^[5] Thrombolytic therapy can be effective, particularly in patients with an early diagnosis. In our case, the first treatment that was preferred was LMWH because of the advanced age of the patients and complications that might occur after thrombolytic therapy. Antibiotherapy is essential for preventing bacterial sepsis due to translocation from ischemic intestines; also, its positive contribution to prognosis is proven. In our case, piperacillin/tazobactam was preferred as an antibiotic; fever and abdominal pain completely improved after the 4th day of treatment.^[6]

Conclusion

MVT is a rare cause of mesenteric ischemia. Mortality and morbidity rates of MVT are still high because of its delayed

diagnosis. Therefore, MVT must be considered in patients with progressive abdominal pain, and detailed physical examination must be done carefully. Contrast-enhanced abdominal CT must be performed for evaluation if there are any clinical suspicions. While clinical findings can be severe, only non-specific abdominal pain can also be observed, similar to our case. In addition, although it is rare, thrombosis in the branches of mesenteric vein should also be considered and a radiologist should be consulted.

Disclosures

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