

Management of Sigmoid Volvulus Patient Diagnosed by Emergency Department

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Summary

In this case report, we aimed to present the clinical course of a 53-year-old male patient who was admitted to the emergency department with a complaint of swelling and pain in the abdomen for 3 days and who was diagnosed with sigmoid volvulus. These pathologies, which we rarely encounter in the colonic dysmotility and advanced age population, appeared at an earlier age due to the comorbid diseases of our patient. Surgical and endoscopic detorsion options and indications will be explained in the direct management of the patient with typical sigmoid volvulus image.

Introduction

Sigmoid volvulus (SV) constitutes 2% to 5% of colon occlusions in western countries and 20% to 50% of occlusions in Eastern countries. Africa, Asia, Middle East, South America, Eastern and Northern European countries and Turkey, are endemic to the SV¹.

SV usually affects adults with the highest incidence seen in 4 -8-decades. Constipation history and colonic dysmotility are well-known risk factors for sigmoid volvulus².

About 17 percent of patients develop symptoms of sudden onset acute severe pain, congestion, and vomiting before or with the onset of abdominal pain. Rarely, impaired blood flow to the sigmoid colon can cause necrosis, peritonitis and sepsis³.

Successful sigmoidoscopy can detort the sigmoid volvulus when advanced along the twisted segment of the colon⁴.

Emergency surgical management is required in patients with positive perforation and peritonitis findings⁵.

In patients with recurrent sigmoid volvulus, surgical resection is recommended during index acceptance or after a short time due to high risk of recurrence and high mortality rates⁵.

Case

A 53-year-old male patient has known diagnoses of previous cerebrovascular disease (SVH), epilepsy and diabetes.

She is using levetiracetam, valproic acid, clopidogrel and metformin. No previous abdominal operation history. He applied to the emergency room with the complaint of abdominal pain and swelling that has been existing for 3 days. It was informed that the patient had not discharged gas and feces for approximately two days. When the anamnesis was deepened, it was found out that the patient had a decrease in his movements secondary to cerebrovascular disease secondary to hemiplegia and lived a sedentary life. It has been learned that the problem of constipation has been for many years.

The patient's hemodynamia was stable when she was admitted to the emergency room. The physical examination findings were abdominally distal. There was no defense and rebound, there was sensitivity. A urinary catheter was inserted for follow-up, and routine blood tests were requested. Then, the patient was taken to the patient with direct abdominal x-ray (ADBG) and chest x-ray. In the laboratory, White Blood Cell count $11.5 \times 10^3/\text{ml}$, Hemoglobin 11.6 g/dl , C-reactive protein 1 mg/L , kidney function tests and liver function tests were normal. Image compatible with sigmoid volvulus reverse U image was present in ADBG (figure 1). The patient was consulted with general surgery and successful colonoscopic detorsion was performed in the emergency endoscopy unit. During colonoscopy, there was no ischemia and necrosis on the colon mucosa. Then he was interned to the general surgery service. The patient was discharged with full recovery at the end of the 3-day service follow-up.

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Figure -1. Direct radiograph taken in the emergency room



Figure -2. Control direct radiography after detorsion

Discussion

Colon volvulus is the twisting of the colon along its axis. The word volvulus is derived from the Latin term *volvare*, which means twist. This twist will cause a complete or partial obstruction of the arterial and venous circulation in the intestine. Consequently, rapid and accurate diagnosis is required to speed up the treatment of this potentially fatal condition.

The volvulus itself is a rare cause of intestinal obstruction, which accounts for 5% of cases of gastrointestinal obstruction and 10-15% of large intestinal obstruction. The most common places for colon volvulus are sigmoid colon (75%), cecum (15%), transverse colon (3%) and spleen flexion (2%)⁶.

A sigmoidoscopy can detort the sigmoid volvulus when advanced along the twisted segment of the colon, thereby ensuring enteric luminal flow. It provides protection of blood flow to the affected sigmoid colon. An additional advantage of sigmoidoscopy is that it allows evaluation of mucosal ischemia and necrosis in the colon^{4,5}.

Mortality associated with sigmoid volvulus is highest in patients who develop ischemia and necrosis and ranges from 11 to 60 percent in case series. In contrast, mortality is less than 10 percent in patients who do not develop gangrene⁷.

The age of the patient in this case is smaller than the average age of sigmoid volvulus, but the patient's 7-year sedentary life and chronic constipation explain the reason for the current condition.

Recurrent sigmoid volvulus occurs in 84 percent of patients after a first attack that is not treated by surgery. In a retrospective study of 168 patients, the mean recurrence time was 58 days. However, the recurrence time can range from hours to weeks or months. Recurrence rates increase in later periods. Mortality rates seem to be higher in patients presenting with recurrent sigmoid volvulus, and have been reported in up to 21% in one study⁸.

Result

Sigmoid volvulus is one of the causes of ileus in the elderly and is important because of its life-threatening complications. It is the first choice for early and successful detorsion treatment in patients without acute abdomen and necrosis findings.

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