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Sclerosing mesenteritis: a case report

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Abstract

Background. Sclerosing mesenteritis (SM) is a rare pathology characterized by chronic, nonspecific inflammation of the fatty tissue of the intestinal mesentery. The exact causes are unknown, however abdominal traumas, surgeries, autoimmune disease, tumors may contribute to the development of sclerosing mesenteritis. The main symptom reported by patients is abdominal pain. The gold standard for diagnosing SM is computed tomography (CT). Upon diagnosis, treatment with glucocorticoids combined with other immunosuppressants is prescribed**.**

Case report. In this case report we analyzed a 46-year-old patient who had been complaining of spasmodic abdominal pain for two years. Additionally, an increase in C-reactive protein (CRP) levels was observed alongside the pain. It was decided to perform imaging studies to determine the cause of the abdominal pain. After performing esopgagogastroduodenoscopy (EGD) and a colonoscopy, no pathology was observed. Antibiotic therapy was started, however, with no improvement in the condition, abdominal CT scan and magnetic resonance imaging (MRI) was performed. After imaging studies, inflammation and edema of the small and large intestines were observed, leading to a diagnosis of sclerosing mesenteritis. The patient was prescribed methylprednisolone. During treatment, the clinical condition improved, and abdominal pain disappeared.

Conclusion. Sclerosing mesenteritis is a rare pathology that causes chronic abdominal pain. There are many factors that can contribute to this condition. It is important, after conducting the appropriate tests, to identify changes characteristic of sclerosing mesenteritis, determine the factors that contributed to its development, and prescribe treatment.

Keywords: abdominal pain, sclerosing mesenteritis, glucocorticoids

1. Introduction

Sclerosing mesenteritis (SM) is a rare pathology characterized by chronic, nonspecific inflammation of the fatty tissue of the intestinal mesentery [1]. The prevalence of the disease ranges from 0.6 to 3.4 percent [2,3]. The exact causes of sclerosing mesenteritis are unknown, but it is believed that nonspecific inflammatory responses to certain diseases and conditions may contribute to its development . According to the literature, the disease can develop in patients following various abdominal traumas or surgeries, as well as it can be diagnosed in patients who are suffering from autoimmune disease, oncological conditions [4,5,6]. In the literature, isolated cases have been described in patients with intestinal ischemia or infectious diseases (tuberculosis, syphilis, influenza, etc.) [7]. The main symptom reported by patients is abdominal pain (70%), with less frequent occurrences of constipation or diarrhea [8,9]. Around 20% of patients may experience systemic symptoms such as fever, night sweats, or weight loss [8,9]. During a physical examination, increased abdominal sensitivity and muscle tension (without peritoneal irritation) may be observed [8,9]. The gold standard for diagnosing sclerosing mesenteritis is computed tomography (CT) but magnetic resonance imaging (MRI) may also be used to confirm SM [10]. We present a case of sclerosing mesenteritis in a male patient.

2. Case report

A year ago a 46-year-old male presented to a gastroenterologist, Hospital of Lithuanian University of Health Sciences, Kaunas Clinics. A patient complained of persistent, spasmodic abdominal pain exacerbated after meals. Additionally, he was experiencing fever, profuse night sweats, and significant weight loss in the past 2 years. These complaints have been accompanied by consistently elevated C-reactive protein (CRP) levels (70-100 mg/l). During physical examination, there was tenderness in the right iliac fossa, with tense abdominal muscles, although there was no evidence of peritoneal irritation. A blood test showed CRP level of 200 mg/l. An abdominal X – ray revealed that the intestines were filled with gas and content with segments of the small intestine appearing dilated. And esopgagogastro-duodenoscopy (EGD) was performed during which no abnormalities were observed. From the patient's medical history, it was known that in January 2023 due to persistent abdominal pain an abdominal CT (Figure 1,2) was performed, revealing changes consistent with focal nodular hyperplasia (FNH) of the liver. Also, the CT scan revealed that the sigmoid colon was elongated, tortuous, and circumferentially thickened, with peritoneal and omental changes resembling carcinosis. There was suspicion of a tumor in the sigmoid colon, but after performing a colonoscopy, no pathology was observed. Based on the results of the previously conducted tests and the patient's condition was not improving, abdominal MRI was performed. In the abdominal MRI (Figure 3), a focal lesion characteristic of FNH (focal nodular hyperplasia) was observed in the liver with no negative dynamics. On the right side of the abdomen, the wall of the small intestine was significantly thickened and distinctly edematous. The surrounding fatty tissue also exhibited marked edema, resembling inflammatory changes. After evaluating the conducted tests, empirical antibiotic therapy with cefuroxime and metronidazole was prescribed. However, with no improvement in

the patient's condition and worsening of abdominal pain, a repeat abdominal CT scan (Figure 4) was performed. It revealed that the inflammatory changes in the intestines on the right side of the abdominal cavity were more pronounced and infiltration was already observed in both the small and large intestine with lymph nodes measuring up to 0,6 cm. Thus, after conducting CT and MRI, inflammation and edema of the small and large intestines were observed, leading to a diagnosis of sclerosing mesenteritis. The patient was prescribed methylprednisolone 40 mg intravenous. During treatment, the clinical condition improved, abdominal pain disappeared and there was a positive trend in inflammatory markers. Additional tests were performed to investigate the cause of SM. Head MRI, chest CT, abdominal ultrasound and enteroscopy were performed but these tests revealed no pathology and ruled out suspected the small bowel Crohn's disease, systemic vasculitis, and infectious process. Additionally, EGD was conducted with biopsies of the duodenum. Biopsy results revealed the parasitic infection in the small intestine caused by the protozoan Giardia lamblia. After conducting tests and with the improvement of the condition, the patient was discharged for outpatient treatment, with a prescription for prednisolone and additional azathioprine. After the course of treatment, the patient did not express any complaints and no longer experienced abdominal pain, so prednisolone was gradually discontinued with continuing azathioprine alone.

3. Discussion

Sclerosing mesenteritis can involve not only the fatty tissue of the mesentery but also affect the omentum, intestinal mucosa, and blood vessels supplying the intestine [1]. It is a rare disease with approximately from 200 to 300 cases described in the literature[11,12]. SM is most diagnosed in the fifth or sixth decade of life [11,12]. About 15 % of all cases of the disease involve asymptomatic patients or those with minimal symptoms [8,9]. Most of the symptomatic patients complain of persistent abdominal pain, often without a specific cause [13,14]. The pathogenesis of SM is not fully understood but it is believed that various factors such as trauma, surgeries, autoimmune disease, oncological conditions, infections, ischemia may contribute to the development of this disease [8,9]. While there is limited literature on the association between giardiasis and the development of SM, this parasitic infection could be one of the etiological factors [7]. SM can be diagnosed incidentally on the abdominal CT scans. The most observed sign is the soft tissue mass at the root of the small intestine mesentery [10]. Enlarged mesenteric or retroperitoneal lymph nodes and thickened intestinal walls may also be seen on CT images [10,15]. Another diagnostic method for identifying SM is MRI, which shows a hyperintense signal on T2-weighted images (edema), along with enlarged lymph nodes [16]. Upon diagnosing sclerosing mesenteritis, treatment is prescribed depending on whether the patient experiences symptoms or not [1,5]. If the disease is diagnosed incidentally and there are no clinical symptoms, then treatment is not indicated, only patient monitoring is necessary. When observing inflammatory changes, patients are often prescribed glucocorticoids (GCK) along with other immunosuppressants (tamoxifen, azathioprine, cyclophosphamide) [1,5]. At the beginning of treatment, prednisolone is commonly prescribed, with an

attempt to gradually taper the dose over 3 months, continuing only with maintenance immunosuppressant therapy, or maintaining minimal GCK supportive doses [1,5]. In rare cases, when conservative treatment is ineffective or complications arise (perforation, obstruction, etc.), surgical intervention may be required [1,5].

4. Conclusions

Our patient is one of the rare cases with SM. He presented with chronic abdominal pain and systemic symptoms. Various instrumental examinations were conducted to identify the cause of the pain, which did not reveal any clear pathology initially. However, progressive inflammatory changes in the intestines were identified. Based on the complaints and findings from instrumental tests, the patient's condition was diagnosed as sclerosing mesenteritis.

Figure 1 Sigmoid colon changes

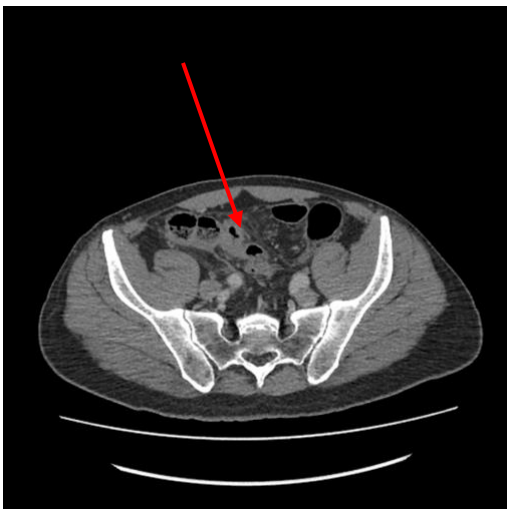


Figure 2 Fatty changes

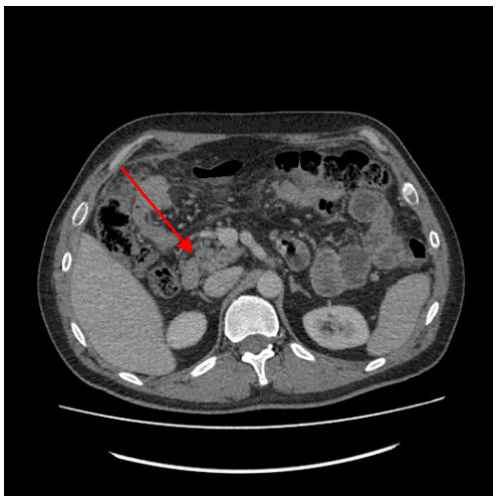


Figure 3 Inflammatory changes in the small intestine

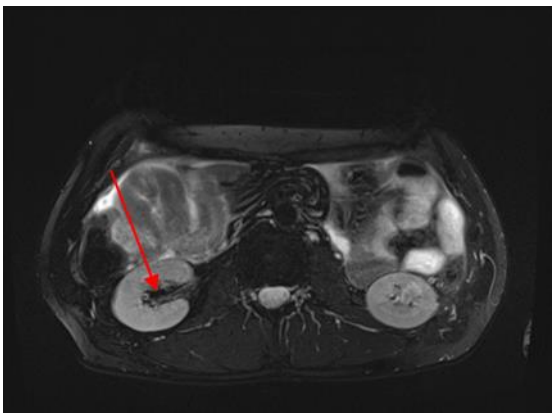
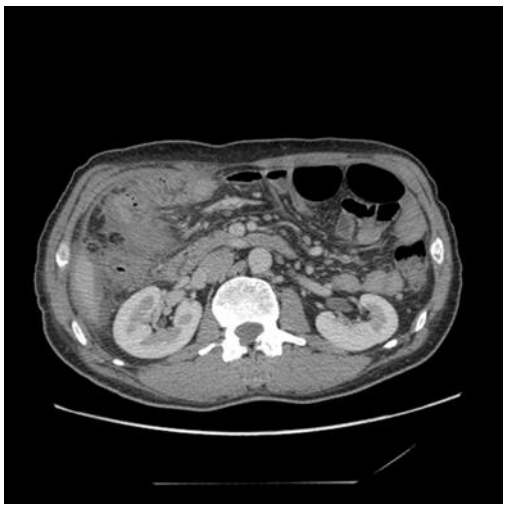


Figure 4 In the right abdominal cavity, the inflammatory changes in the bowel were more pronounced and of larger extent over time



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