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Lymphocytic colitis: diagnostic challenges in family doctor's practice - a case report

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DISCOVERY SCIENTIFIC SOCIETY

ABSTRACT

Microscopic colitis (MC) is a chronic inflammatory disease of the gastrointestinal tract, that typically presents with chronic watery and non-bloody diarrhea. Histopathological examination is crucial to make a correct diagnosis. Two major types of the disease are recognized: collagenous inflammation and lymphocytic inflammation. MC most often affects patients in their seventies and is more common in women. A 67-year-old woman presented with a five-day history of watery diarrhea. Her medical history included multiple chronic diseases and the use of, among others, proton pump inhibitors. The patient received symptomatic treatment with moderate effect. Three months later, she reported persistent diarrhea with mucus, light greenish stools, and lower abdominal pain that did not resolve after treatment with metronidazole and drotaverine. A colonoscopy was performed. Subsequently, the patient requested a home visit due to severe abdominal pain, nausea, vomiting, diarrheal stools with mucus and rectal tenesmus. The referring physician was shown the result of a histopathological examination, which confirmed lymphocytic colitis. Due to a significant worsening of her general condition, the attending physician decided to refer the patient to the internal medicine department. The medical team diagnosed acute renal dysfunction and stabilized renal function. The patient was discharged home on oral budesonide. A significant reduction in diarrheal symptoms was noted. Increasing awareness among family doctors about MC is necessary. Early detection of MC is crucial.

Key words: microscopic colitis, acute kidney injury, diarrhea

1. INTRODUCTION

Microscopic colitis (MC) is a chronic inflammatory disease of the gastrointestinal tract with an unknown etiology. MC typically presents with chronic watery and non-bloody diarrhea. However, other symptoms may also occur, such as nocturnal diarrhea, abdominal pain, faecal urgency, incontinence or mild weight loss (Simondi et al., 2010). In addition, patients with MC report severe fatigue, anxiety, and depression (Kane et al., 2018). Based on the histopathological findings, two major types of the disease are recognized: collagenous and lymphocytic inflammation, along with their incomplete forms. Therefore, histopathological examination is crucial for making an accurate diagnosis, provided it correlates

closely with endoscopic and clinical findings (Miehlke et al., 2019). Collagenous colitis appears to be the more severe type, and lymphocytic colitis tends to occur earlier in life (Mellander et al., 2016).

The pooled overall incidence rate of MC is estimated to be 11.4 cases per 100.000 person-years (Miehlke et al., 2021). The overall incidence of collagenous colitis is 4.14 and that of lymphocytic colitis is 4.85 per 100.000 person-years at risk, which is comparable to the incidence of inflammatory bowel disease (Tong et al., 2015). Additionally, women have a three- to four-fold increased risk of acquiring MC, and the incidence increases with age (Tong et al., 2015). MC most often affects patients in their seventies, although it can occur at any age and represents a significant health concern that reduces the quality of life of patients (Madisch et al., 2014). Exact data on the incidence of MC in Poland are lacking. However, a national registry is being created by the Microscopic Colitis Section of the Polish Society of Gastroenterology. The data collected so far have not yet been published but will soon allow for a better understanding of the regional conditions related to MC (Rutkowski et al., 2024).

Therefore, we present a clinical case of a patient suffering from MC, highlighting the diagnostic challenges encountered in a primary care setting.

2. CASE REPORT

A 67-year-old female patient presented to the primary care clinic with a 5-day history of watery diarrhea occurring 5-6 times per day, without nausea, vomiting, or fever. Diarrhea did not subside after loperamide. There was no blood or mucus in the stool. Laboratory results were within the normal range. Initially, the patient received symptomatic treatment: oral rehydration, an easily digestible diet, rest, and probiotics.

The previous medical history included high-grade urothelial bladder cancer treated with transurethral resection of bladder tumor, currently under constant urological supervision for eight years. The patient underwent radiotherapy for cervical cancer 34 years ago. Additional comorbidities included NYHA class II heart failure, paroxysmal supraventricular tachycardia, generalized atherosclerosis, type 2 diabetes, chronic obstructive pulmonary disease, Prinzmetal's angina, and gastroesophageal reflux disease. She suffers from chronic pancreatitis and has a history of severe acute pancreatitis.

The patient was permanently taking the following medications: omeprazole 20 mg, bisoprolol 10 mg, digoxin 100 mg, pancreatin 10000 IU twice daily, allopurinol 100 mg, atorvastatin 30 mg and combined inhalation aerosol containing budesonide, formoterol and glycopyrronium.

Three months later, the patient reported diarrhea with mucus occurring several times a day for 3 days and lower abdominal pain, persisting for several weeks. Physical examination was unremarkable. A general stool test revealed sour odor, a large amount of mucus, and a significant number of starch granules. While awaiting the colonoscopy, the patient had two additional episodes of diarrhea and light greenish stools 2-4 times a day. Due to the possible infectious cause of diarrhea, treatment included metronidazole 500 mg twice daily for 7 days, drotaverine 40 mg 3 times daily, appropriate hydration, electrolytes three times a day, and an easily digestible, non-constipating diet was administered. However, the symptoms did not fully resolve.

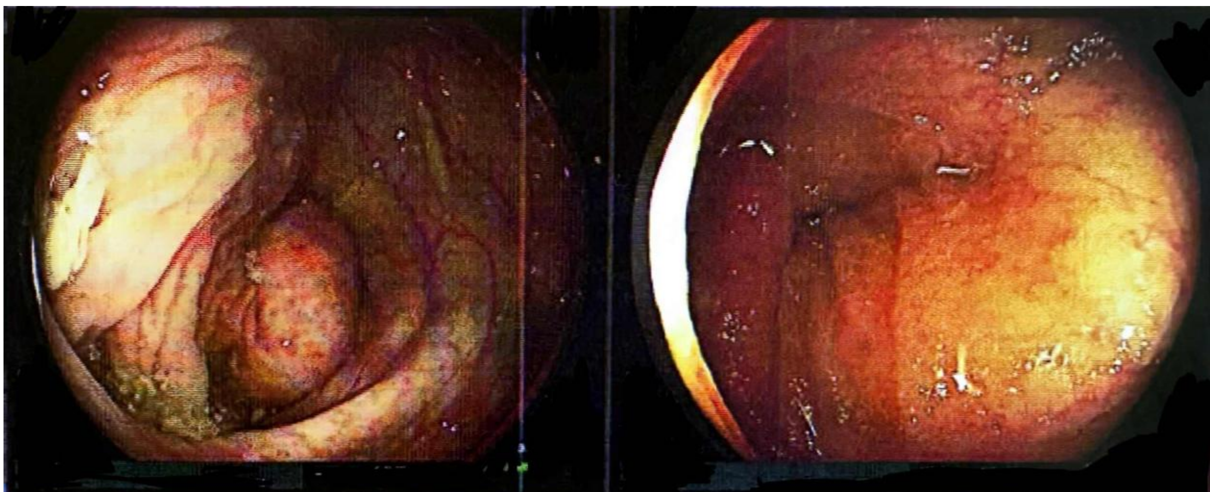

Figure 1. Colonoscopic image of the intestinal lumen.

During the colonoscopy, a sessile rectal polyp was removed, and a mildly edematous mucosa in the terminal section of the intestine was observed (Figure 1). A biopsy was taken for histopathological examination. In the meantime, the patient continued home treatment. However, two weeks later, she presented again, this time due to cough and sore throat, muscle pain, weakness, abdominal pain, excessive sweating, diarrhea, and nausea. An antigen test for the viruses: influenza, SARS-CoV-2, and respiratory syncytial virus was negative. Symptomatic treatment was initiated to alleviate the symptoms of the viral respiratory infection. Due to nausea, oral metoclopramide was added to the previous treatment.

Four days later, the patient requested a home visit due to diffuse abdominal pain, especially in the lower left quadrant, nausea, vomiting, diarrheal stools with mucus, and rectal tenesmus. Physical examination revealed a soft abdomen that tender in all quadrants, with no signs of pathological oedema or peritoneal irritation. Blood pressure was 102/68 mmHg, pulse 83 beats per minute, saturation 98%. During the visit, the patient showed a histopathological result.

The patient had just received it, but had not had the opportunity to consult it with referring physician due to the severity of her symptoms. Histopathological examination revealed a tubular adenoma of the colon with low-grade epithelial dysplasia. Moreover, numerous inflammatory infiltrates in the lamina propria of the intestinal mucosa and 34 intraepithelial lymphocytes per high-power field – consistent with lymphocytic colitis. Due to pain exacerbation and the ineffectiveness of the previous outpatient procedure, the general practitioner decided to refer the patient for inpatient treatment.

Laboratory tests performed in the internal medicine department revealed acute kidney injury (AKI), with leukocytosis of 14710/μl and predominance of neutrophils, C-reactive protein 3.9 mg/l, creatinine level of 1.95 mg/dl, estimated glomerular filtration rate (eGFR) of 26 ml/min/1.73m^2, potassium 5,62 mmol/l and sodium 132.9 mmol/l. Other laboratory parameters were within normal limits.

The medical team administered fluid therapy and discontinued medications with nephrotoxic potential. Due to the diagnosis of lymphocytic colitis, initial treatment included prednisone 20 mg. Stool culture revealed persistent growth of Candida albicans. Bacteria from the genera Clostridioides, Yersinia, Shigella, Salmonella, Aeromonas, and Plesiomonas were not detected. Therefore, fluconazole therapy was initiated. As a result of the treatment, there was a reduction in pain and lower gastrointestinal complaints, and stabilization of creatinine levels at 1.03 mg/dl, eGFR 53 ml/min/1.73m^2. The patient was discharged home in good general condition to continue treatment with oral budesonide at a dose of 9 mg daily.

Two weeks after discharge, the patient reported normalization of bowel habits - she reported passing 1-2 stools of normal consistency per day and a decrease in abdominal pain. The level of creatinine and electrolytes remained stable. Currently, the patient is awaiting gastroenterology consultation to determine further treatment.

3. DISCUSSION

Microscopic colitis is a common cause of chronic and non-bloody diarrhea in the elderly population, and its incidence continues to rise. Therefore, it is necessary to maintain diagnostic vigilance, especially in primary care, as MC is identified in 10–20% of patients suffering from chronic watery diarrhea (Munck et al., 2014). As general practitioners are often less familiar with MC than with other causes of chronic diarrhea, MC may be misdiagnosed (Münch et al., 2020).

To make an accurate diagnosis, it is crucial to perform a colonoscopy, access to which may be limited in primary health care (Münch et al., 2020). In some countries, such as United Kingdom, the National Institute for Health and Care Excellence recommends that, to minimize colonoscopy referrals, patients with fecal calprotectin concentration below 100 μg/g should initially be treated as having IBS, without the need for endoscopy (Nice, 2013). However, in most MC cases, the faecal calprotectin concentration is below the suggested threshold (Wildt et al., 2007).

According to guidelines, a colonoscopy with biopsies from at least the right and left colon is required for the histological assessment of MC (Miehlke et al., 2021). However, it is not uncommon for routine biopsies to be omitted during colonoscopy in patients with a history of chronic diarrhea (Münch et al., 2020). In patients with MC, the colon is usually macroscopically normal. Therefore, the diagnosis of MC can only be based on histological examination of colonic biopsies, which may contribute to diagnostic delays (Langner et al., 2015). It is also worth noting that the increased availability of colonoscopists and primary care physicians in a given area is associated with a higher rate of colonoscopy (Benarroch-Gampel et al., 2012).

It is worth mentioning that a patient's reluctance to undergo colonoscopy may complicate the diagnostic process. In the study of Jetelina et al., (2019) the authors identified patient-related barriers to accessing colonoscopy, including lack of health insurance, comorbid conditions, social barriers such as transportation issues and limited social support, concerns about the procedure, competing life priorities, adverse effects of bowel preparation or low health literacy.

Chronic diarrhea, the main symptom of MC, is a common condition affecting 3%–5% of the population and may be a symptom of various diseases. The symptoms of MC often resemble those of irritable bowel syndrome (IBS), which is characterized by changes in bowel habits such as diarrhea, flatulence, abdominal distension, a strong urge to defecate, or nocturnal diarrhea (Chey et al., 2015). Abboud et al. found, that 38% to 58% of patients with MC met the diagnostic criteria for IBS, especially younger patients. This symptom overlap may delay colonoscopy and histological assessment in patients with MC (Abboud et al., 2013). This is particularly important because the diagnosis of IBS is often made based on clinical history, and the treatment strategies differ from those for MC (Ford, 2020). Furthermore, some physicians may be unfamiliar with MC, and given the wide range of conditions that present with chronic diarrhea, reaching a correct diagnosis can be a lengthy and frustrating process for patients (Münch et al., 2020).

MC does not shorten life expectancy, but it impacts quality of life and can be a disabling, leading to difficulties in adaptation, coping and returning to previous levels of functioning (Pihl et al., 2019). However, in a nationwide cohort study in Sweden, Khalili et al. found that patients with MC had an increased risk of death, although this appears to be related to comorbidities in this population (Khalili et al., 2020). Mainly since MC primarily affects older people who often have multiple other diseases (Miehlke et al., 2019). Existing research indicates that patients with MC are at an increased risk of major adverse cardiovascular events compared to the general population, probably due to chronic inflammation, metabolic disorders, including diabetes, hypertension, and dyslipidemia (Rutkowski et al., 2024). At the same time, data suggest that MC patients have a lower risk of colorectal adenoma or cancer, and even the surveillance colonoscopy is not recommended as standard for this group (Liu et al., 2022). Instead, European guidelines recommend screening of celiac disease in patients with MC (Miehlke et al., 2021).

In our case report, the patient developed AKI, which was an indication for her hospitalization. Research shows that older patients are at a higher risk of hospitalization due to MC. Due to the clinical manifestation of MC, patients are usually hospitalized due to diarrhea, abdominal pain, and AKI (Raju et al., 2024; Silva et al., 2016). Additionally, proton pump inhibitors, as well as selective serotonin reuptake inhibitors, are associated with a significantly increased risk of developing MC (Tong et al., 2015). The patient we described was taking omeprazole because of gastroesophageal reflux disease, which may have contributed to the development of the symptoms.

4. CONCLUSION

It is necessary to increase awareness among family doctors about the symptoms, diagnosis, and treatment of MC. Early detection of MC leads to earlier treatment, which can improve patients' quality of life and protect them from complications.

List of abbreviateons

AKI – Acute Kidney Injury
eGFR - estimated Glomerular Filtration Rate
IBS - Irritable bowel syndrome
MC – Microscopic Colitis
NYHA - New York Heart Association
SARS-CoV-2 - Severe Acute Respiratory Syndrome Coronavirus 2

Author's Contributions

Karol Miklusiak was author of the concept, involved in gathering the necessary clinical data. Karol Miklusiak and Klaudia Miklusiak performed the initial analysis, drafted the introduction, case report, discussion and conclusion sections.

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Informed consent

Written & Oral informed consent was obtained from individual participants included in the study.

Ethical approval

Not applicable.

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Conflict of interest

The authors declare that there is no conflict of interest.

Data and materials availability

All data associated with this study will be available based on the reasonable request to corresponding author.

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