LETTER TO THE EDITOR

A case of ulcerative colitis co-existing with pseudo-membranous enterocolitis

Dear Sir,

The overall incidence of *Clostridium difficile* infection is increasing over the decades and super-infection with *C. difficile* is also known to exacerbate the underlying inflammatory bowel disease (IBD). IBD patients with *C. difficile* infection have longer hospital stay, consume more healthcare resources and also have higher mortality rates than the patients with *C. difficile* infection alone. Here, we discuss an IBD patient represented with *C. difficile* infection who took the exact diagnosis via colonoscopic procedure even after a negative stool examination for *C. difficile*.

A 60 years old woman admitted to our clinic with watery diarrhea, lower abdominal pain, fatigue, malaise, nausea and vomiting for a week. She had a previous medical history of ulcerative colitis for 13 years and was relatively stable with sulfasalazine enema treatment. Of note, the patient did not have antimicrobial exposure within the 3 months prior to admission. Physical examination revealed left-sided abdominal tenderness and signs of mild dehydration as loss of appetite, dry mouth, dry skin and tachycardia. Laboratory results showed mild leukocytosis of 11.8 × 10³ μ/L, normal hemoglobin and platelet levels, normal liver enzymes and renal function tests. Serum sodium level was 137 mmol/L (normal: 136–145), and potassium level was 3.2 mmol/l (normal: 3.5–5.1). Acute phase reactants were slightly elevated, C-reactive protein level was 13 mg/L (normal: 0–5) and sedimentation rate was 61 mm/h. Plain films of the abdomen were unremarkable. After hydration and correcting the potassium levels, a proctosigmoidoscopy was performed showing characteristic multiple elevated, adherent yellowish-white plaques of 2–10 mm in diameter on colonic mucosa forming pseudo-membranes consistent with a diagnosis of pseudo-membranous enterocolitis (PMC). The other parts of the colonic mucosa were affected from ulcerative colitis but it was not an active phase of the disease (Fig. 1), and biopsies were obtained. According to the endoscopic view, oral ornidazole treatment was added to the patient’s therapy. Stool sample was sent for culture including assay for *C. difficile* toxin. Toxin assay failed to show any evidence of *C. difficile* infection or indeed for the presence of any other enteric pathogens.

The histology was consistent with PMC showing mixed inflammatory infiltrate involving the lamina propria. After 14 days of ornidazole treatment, colonoscopy was repeated and showed a complete resolution of the plaques (Fig. 2), and she was discharged without any symptoms.

The increasing environmental contamination of *C. difficile* and decreasing host defense in IBD patients are seemed to be the most important risk factors of the higher rates of *C. difficile* infection in IBD patients. Antibiotic use (fluoroquinolones, third generation cephalosporins etc.) and gastric acid suppression were also reported as additional risk factors for *C. difficile* infection. The rate of *C. difficile* infection in IBD patients was reported to be increased from 1.8% to 4.6% (doubled in CD and tripled in UC), and half of them had to be hospitalized and 20% of them underwent colectomy. These results are poorer than the ones from non-IBD patients (four times greater mortality rates in IBD group). In compared with CD, UC patients had higher rates of emergence surgery and in-hospital mortality (10.4% vs 8%, p:0.04 and 5% vs 3%, p:0.01, respectively).

Figure 1 Proctosigmoidoscopy showing characteristic multiple elevated, adherent yellowish-white plaques of 2–10 mm in diameter on colonic mucosa forming pseudo-membranes.
The diagnosis of PMC depends on the demonstration of \textit{C. difficile} toxins in the stool or showing the unusual but characteristic adherent yellow plaques at proctosigmoidoscopy or colonoscopy. The mostly used test for detecting \textit{C. difficile} in the stool samples is ELISA which has only 75% sensitivity.\textsuperscript{5} It was reported that first testing could able to diagnose only 54% of \textit{C. difficile} infected patients, whereas the rates increased after repeating the test (75%, 78% and 92% with the second, third and fourth testing).\textsuperscript{2} None of the patients were diagnosed as \textit{C. difficile} infection after colonoscopic procedure.\textsuperscript{1}

The vital point after getting the diagnosis of PMC is avoiding the initiation of corticosteroid without an appropriate antibiotic therapy against \textit{C. difficile} infection. Both metronidazole and oral vancomycin are the first choice drugs to be used for PMC therapy.\textsuperscript{5}

However, it was also noted that some experts prefer to use oral vancomycin in patients underlying IBD or the ones with serious symptoms or signs.\textsuperscript{5}

In conclusion, to perform colonoscopic examination in an IBD patient admitted with exacerbation like symptoms is crucial not to overlook PMC even after a negative result of stool examination for \textit{C. difficile}.

References


Serta Kilınçalp*  
Akif Altınbaş  
Ömer Başar  
Murat Deveci  
Osman Yüksel  

\textit{Diskapi Yıldırım Beyazıt Educational and Research Hospital, Department of Gastroenterology, Ankara, Turkey}

*Corresponding author. Tel.: +90 5544934024.  
\textit{E-mail address: serta80@gmail.com} (S.Kilınçalp).

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