Secondary polyserositis with primary cytomegalovirus infection in a patient with ulcerative colitis undergoing immunosuppressive treatment.

Jose María Huguet*, Genesis Castillo, Patrícia Suárez, Luis Ferrer-Barceló, Lara González, Carlos Boix, Cecilia Albert, Javier Sempere

Department of Digestive Diseases, General University Hospital of Valencia, Valencia, Spain

Abstract

This paper presents the case study of a patient with ulcerative colitis (UC) undergoing immunosuppressive treatment with azathioprine who exhibited a severe primary cytomegalovirus infection. The patient presented with jaundice (mild acute hepatitis) and polyserositis which were treated with a specific antiviral treatment. The patient did not choose for the recommencement of immunosuppressive treatment after its initial discontinuation; therefore, maintenance treatment was administered with oral Mesalazine.

Keywords: Ulcerative colitis, Cytomegalovirus, Primary infection.

Accepted on March 30, 2018

Introduction

Cytomegalovirus (CMV) infections are common throughout the world. In immunocompetent patients, primary infections, reactivations and reinfections are usually asymptomatic or appear as self-limiting mononucleosis syndromes [1]. These can lead to serious pathologies with multisystemic involvement, particularly in immunocompromised patients. Hepatitis is the most common expression of CMV infection in liver transplant recipients [2].

CMV should be excluded for patients with acute steroid-resistant colitis. For cases of severe steroid resistant colitis in which CMV is detected in the mucosa during immunomodulator therapy, antiviral therapy should be initiated, and the discontinuation of immunomodulators considered until colitis symptoms improve. Immunomodulator therapy must be discontinued when systemic CMV disease is present [3].

Case Report

The patient was a 32-year-old male. Ulcerative pancolitis with moderate activity (E3 S2 on the Montreal classification) was diagnosed in June, 2011.

Once diagnosed, treatment with oral prednisone (60 mg per day, with a weekly progressive decrease) and oral Mesalazine (4 grams per day) was prescribed. The analytical study conducted during the diagnosis ruled out the presence of active viral or bacterial infections (negative HIV, HCV, HBV and CMV and positive EBV and HSV IgG). Infectious origin was also ruled out by means of a stool culture and parasitological analysis.

Treatment with azathioprine was initiated with a dosage of 2.5 mg/kg of weight/day due to the development of steroid dependence.

One year later, the patient went to the emergency room due to clinical symptoms which appear in the form of low-grade fever, jaundice and elevated transaminases with no abdominal pain, reporting only general discomfort. The number of bowel movements had not increased, and there was no blood in the stool. Laboratory tests showed bicytopenia (leukocytes 2.6 $\times 10^9$ L, platelets 86 $\times 10^9$/L), total bilirubin 2.09 mg/dl, 200 GPT U/L, CRP 5.1 mg/dL, INR 1.2. Acute cholecystitis was suspected based on the ultrasound taken in the emergency room; however, the patient was admitted for management with conservative medical treatment due to the diagnostic uncertainties involved in the case. Viral serologies were requested upon admission. A laparoscopic cholecystectomy was performed at 48 hours after admission. Cholecystectomy was performed to objectify intensification of jaundice and results of previous ultrasound. and before the intensification of the jaundice (the histological analysis of the surgical specimen was chronic cholecystitis with cholesterolosis). Serositis was not suspected. In the postoperative period, the patient exhibited elevated fever, elevated bilirubin and transaminases, and clinical findings compatible with polyserositis (mild ascites, pleural effusion, and mild pericardial effusion). The requested serology results revealed positive CMV IgM with negative IgG and positive blood PCR for CMV. Antiviral treatment was started with IV Ganciclovir at a dose of 500 mg/12 hours, observing an improvement both clinically and in liver function parameters on the third day. After the patient was discharged, treatment with oral Valganciclovir was maintained for 21 days.

The immunosuppressive treatment had been suspended while the patient was in the hospital, as it was a serious infection in an immunosuppressed patient. Two years later, the patient has remained asymptomatic and is undergoing maintenance treatment only with 4 grams per day of Mesalazine. The patient did not wish to recommence immunosuppressive treatment.

Discussion

The prevalence of CMV infection can vary according to the criteria upon which the diagnosis is based [4]. A prevalence of approximately 70% has been reported in patients with ulcerative colitis [5].

IBD patients at risk of opportunistic infections and those with malnutrition are treated with immunomodulators, particularly in combination [3].

Primary infection with CMV or reactivation in immunocompromised patients can become serious; therefore, in these cases, specific treatment must be initiated, and immunosuppressive treatment discontinued [6]. The decision to start again the treatment should be weighed and agreed upon with the patient [3].

Conclusion

At times, the clinical diagnosis of the primary infection may not be simple due to the wide range of symptoms and clinical signs which may occur [7,8] and the broad differential diagnosis that we must perform [1,9]. We think that serositis was not worsened by cholecystectomy.

Amino salicylates are the first-line treatment for the maintenance of patients who have initially responded to Mesalazine or steroids (oral or rectal) in mild to moderate UC [10]. They can also be an alternative for those patients in whom there are contraindications to other therapies, or if the patient does not wish to take on the potential side effects.

References

1. Beswick L, Ye B, Van Langerber DR. Toward an algorithm for the diagnosis and management of CMV in patients with colitis. Inflamm Bowel Dis. 2016;22:2966-976.
2. Cisneros Herreros JM, Herrero Romero M. Hepatitis due to herpes group viruses. Enferm Infecc Microbiol Clin. 2006;24:392-7.
3. Rahier JF, Magro F, Abreu C, et al. European Crohn's and Colitis Organisation (ECCO); Second European evidence-based consensus on the prevention, diagnosis and management of opportunistic infections in inflammatory bowel disease. J Crohns Colitis. 2014;8:443-68.
4. Romkens TE, Bulte GJ, Nissen LH, et al. Drenth JP. Cytomegalovirus in inflammatory bowel disease: A systematic re-view. World J Gastroenterol. 2016;22:1321-330.
5. Domenech E, Vega R, Ojanguren I, et al. Cytomegalovirus infection in ulcerative colitis: a prospective, comparative study on prevalence and diagnostic strategy. Inflamm Bowel Dis. 2008;14:1373-79.
6. Garrido E, Carrera E, Manzano R, et al. Lopez-Sanroman A. Clinical significance of cytomegalovirus infection in patients with inflammatory bowel disease. World J Gastroenterol 2013;19:17-25.
7. Qian JY, Bai XY, Feng YL, et al. Cholestasis, ascites and pancytopenia in an immunocompetent adult with severe cytomegalovirus hepatitis. World J Gastroenterol. 2015;21:12505-2509.
8. Alidjinou EK, Lazrek M, Libier L, et al. A patient with fever, abdominal pain and bicytopenia: Trouble once again with these IgM antibodies. J Clin Virol. 2016;75:60-3.
9. Pillet S, Pozzetto B, Jarlot C, et al. Management of cytomegalovirus infection in inflammatory bowel diseases. Dig Liver Dis. 2012;44:541-48.
10. Harbord M, Eliakim R, Bettenworth D, et al. European Crohn's and Colitis Organisation (ECCO); Third European evidence-based consensus on diagnosis and management of ulcerative colitis. Part 2. Current Management. J Crohns Colitis. 2017;11:769-84.

***Correspondence to:**

Dr. Jose María Huguet
Department of Digestive Diseases
General University Hospital of Valencia
Avenida Tres Cruces
Valencia
Spain
Tel: +34 606 394 982
E-mail: josemahuguet@hotmail.com