Efficacy of Rituximab Combined With Cyclophosphamide in a Patient With Systemic Lupus Erythematosus and Peritoneal Vasculitis Refractory to Conventional Immunosuppressive Therapy

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ABSTRACT

Peritoneal vasculitis is a rare and severe clinical manifestation of systemic lupus erythematosus. We report a patient who presented with ascites due to peritoneal vasculitis and cutaneous, articular, hematological, and renal inflammatory activity. Treatment with glucocorticoids and immunosuppressive drugs was ineffective. In view of the resistance to different therapies, 4 weekly infusions of 375 mg/m² of rituximab (RTX) were started, in association with cyclophosphamide pulses during the first and the third weeks. With this treatment strategy, the patient reached a complete response which was achieved in later flares of inflammatory activity (the second and third flares were multisystemic and with ascites again, and the fourth flare with nephritis).

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Introduction

Ten percent of patients with systemic lupus erythematosus (SLE) develop ascites, which can be due to multiple causes. It is usually related to nephrotic syndrome, heart failure, constrictive pericarditis, protein-losing enteropathy, or Budd-Chiari syndrome. Gastrointestinal vasculitis affects 1%-2% of all patients with SLE. It can present itself in any of its components, including the peritoneum, and can lead to severe complications. Peritoneal vasculitis is an infrequent cause of ascites. We present the case of a patient with SLE and steroid and other immunosuppressant-resistant peritoneal vasculitis. Peritoneal vasculitis is a frequent cause of ascites.

Case Report

A 28-year-old woman was diagnosed in 2001 with SLE based on skin and joint involvement, sicca syndrome, lymphopenia, and positive antinuclear antibodies. In January 2003 treatment with steroids was started with 3 pulses of 1 g of intravenous (IV)
Gastrointestinal vasculitis is an infrequent manifestation of SLE (1%-2% of cases with abdominal pain). It can manifest in a diverse manner, from asymptomatic ascites to acute abdominal pain. Mortality is high (53% when the patient has an acute abdomen and up to 50% if the patient has intestinal infarction and perforation). It is manifested as pain, vomit, diarrhea, rectal bleeding, and ascites, with orienting radiological signs: thickening of the intestinal wall and dilation of the affected segments, intestinal pneumatosis, and changes in mesenteric vessels (inurigation, “comb” sign, attenuation of mesenteric fat). In this patient, in spite of the demonstration of peritoneal vasculitis, no clinical or radiological signs of intestinal vasculitis were seen. We only found a similar situation described in one other case. Usual treatment of SLE with severe systemic affection is based on steroids and immunosuppressants. However, mortality in cases of peritoneal vasculitis is very high. RTX is a chimeric monoclonal antibody directed versus CD20 which produces a transitory depletion of B lymphocytes. Its binding to ligand affects the activation and differentiation of B lymphocytes. Clearance of B lymphocytes by RTX is produced by several mechanisms: complement dependent cytotoxicity, antibody dependent cytotoxicity, and induction of apoptosis. B lymphocytes have important functions, apart from antibody production: they are antigen presenting cells, regulate the activity of T lymphocytes, and produce cytokines relevant to inflammation. After a literature search on MEDLINE (using the key words lupus, vasculitis, and rituximab), we found no reference on its efficacy in patients with severe peritoneal vasculitis. The efficacy of RTX combined with CF could be called into question if the reappearance of clinical activity a few months after the administration of the first 3 cycles of treatment is considered. In our opinion, the benefits of the repeated response to treatment should not be questioned, because in all therapeutic cycles there was a complete remission of activity. Complete remission currently has been maintained for 13 months after the fourth cycle of treatment. We believe this case illustrates the usefulness of RTX combined with CF in SLE and severe visceral affection resistant to other treatment options.
References


