CASE REPORT

Acute Hepatitis C in a Patient Receiving Etanercept∗

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Abstract According to the literature, the use of tumor necrosis factor (TNF) inhibitors in patients with chronic hepatitis C infection is safe and effective. There have been no reports, however, of primary infection with the hepatitis C virus during treatment with a biologic agent. We report the case of a patient with long-standing moderate to severe psoriasis who developed acute hepatitis C while being treated with etanercept. Biologic therapy was continued and the infection was successfully treated with pegylated interferon, which achieved a sustained virologic response. Etanercept did not have a negative impact on disease outcome or on response to antiviral treatment.

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Introduction

Tumor necrosis factor (TNF) antagonists have been used to treat a variety of conditions in patients with chronic hepatitis C virus (HCV) infection, as shown by numerous case reports in the literature. However, we have found no reports of primary HCV infection that occurred after treatment with an anti-TNF biologic had been started. We present such a case of primary HCV infection that occurred while the patient was on etanercept for psoriasis.
Widespread desquamating erythematous plaques

In our patient, treatment with TNF also appears to be implicated in the pathogenesis of fibrosis of the liver, which leads to cirrhosis in 20% of HCV-infected patients over a period of 20 years. 

Anti-TNF agents might therefore even prove beneficial for some of these patients. In our patient, treatment with etanercept may have attenuated liver damage secondary to the primary acute HCV infection.

Regarding the possible adverse effect of anti-TNF agents on viral load or disease progression, relevant information can be inferred from reports of more than 80 cases involving chronically HCV-infected patients under such treatment (particularly with etanercept) for a variety of autoimmune diseases. 

The absence of significant changes in viral load and transaminase levels is a striking observation in these cases. Paradisi and coworkers recently reported the results of liver biopsy at baseline and after 12 months of etanercept treatment in 2 HCV-infected patients with psoriasis, observing no progression of liver damage. The use of anti-TNF agents in patients with chronic HCV infection therefore seems to be safe based on existing evidence. However, we were unable to find published cases like the one we report, in which acute HCV infection occurred during anti-TNF treatment. Our patient’s course suggests that continuing etanercept in a primary infection like this one will not have an adverse effect on disease progression or the response to interferon, although further confirmation is required.

Elevated TNF levels potentially also interfere with the response to antiviral treatment in HCV. 

In a small double-blind, randomized placebo-controlled trial that assessed the possibility that etanercept might boost the effect of interferon–ribavirin treatment of chronic HCV infection, the authors reported that the negativization of viral load was significantly greater in the etanercept group (63%) than in the placebo group (32%). In the case we report, it is possible that in addition to a lack of an adverse effect of continued etanercept administration on the efficacy of the antiviral regimen, etanercept may even have assisted HCV-RNA negativization.

Finally, the fact that transmission in this case was by heterosexual contact suggests that even though clinical guidelines state that risk is low for this route, treatment with a biologic might increase the risk. Evidently, an exhaustive medical history should be taken for all patients on these drugs. Candidates for anti-TNF therapy are screened for contact with tuberculosis. It might also be useful to...
investigate the possibility of exposure to other diseases, especially through contact with relatives or other persons who live with the patient, so that we are not taken by surprise by infections that might compromise our patients’ safety during treatment. HBV vaccination is also necessary for patients with negative HBV serology in order to guard against primary infection during treatment with a biologic agent.

This is the first report of a case of primary HCV infection during a period of anti-TNF therapy. The course of disease in our patient suggests that it is safe to maintain etanercept treatment in cases of acute HCV infection. Just as etanercept does not have an adverse effect on the treatment of chronic infection, there seems to be no interference in acute infection either. This observation should be confirmed in larger series.

Conflicts of Interest

Dr M. Armengot-Carbó has an agreement with Pfizer to collaborate on another publication.

Dr M. Velasco and Dr E. Gimeno have participated in clinical trials, provided consulting services, received speaking fees, or accepted funding to attend conferences or training sessions from the following laboratories: Pfizer, Abbott, and Janssen-Cilag.

Dr R. Giner declares that she has no conflicts of interest.

References