Vogt-Koyanagi-Harada disease occurring during pegylated interferon-α2b and ribavirin combination therapy for chronic hepatitis C

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INTRODUCTION

Interferon combined with ribavirin is commonly used in treating chronic hepatitis C. Interferon sometimes results in common side effects such as flu-like symptoms, fatigue, myalgia, headache, and in rare but fatal ones such as depression, suppressed bone marrow, interstitial pneumonia, diabetes, or autoimmune diseases.1 Vogt-Koyanagi-Harada (VKH) disease is a multi-systemic granulomatous inflammatory disease with ophthalmic involvement (uveitis and retinal detachment), ear and meningeal involvement (headache, tinnitus, and encephalitis), and skin and hair change (vitiligo, alopecia, and poliosis). It is a very rare complication associated with interferon therapy for chronic hepatitis C.2 Vogt-Koyanagi-Harada disease is a multisystem syndrome characterized by ocular (uveitis and retinal detachment), neurological (headache, tinnitus, and meningoencephalitis), and integumentary (vitiligo, alopecia, and poliosis) involvement. Although the pathogenesis of VKH disease is not well understood, an autoimmune T-cell response to a melanocyte-associated antigen is considered to be a cause of VKH disease. The complex immunological response to interferon and ribavirin may induce or exacerbate the autoimmune condition; however, VKH disease is a very rare complication associated with interferon therapy in chronic hepatitis C. We report a case of VKH disease occurring during pegylated interferon-α2b and ribavirin combination therapy for chronic hepatitis C. (Korean J Hepatol 2011;17:61-65)

Keywords: Vogt-Koyanagi-Harada disease; Interferon-α2b; Chronic hepatitis C

CASE REPORT

A 58-year-old woman visited our hospital for evaluation of chronic hepatitis C. The patient was diagnosed as chronic hepatitis C 10 years ago, but had not received any treatment. She had been taking amlodipine 5 mg for hypertension for 8 years. She had no history of alcohol consumption, smoking, or injection drug use. Dermatological, pulmonary, cardiac, and neurological examinations were normal. On her first visit to our hospital, the liver function test and the complete blood cell count were normal, and the serologic tests for hepatitis A and B and HIV were negative. She was infected with hepatitis C virus (HCV) genotype 1b, and HCV RNA level was 3.8×10^6 copies/mL. There were no specific findings except for the hepatic cyst from abdominal CT scan. Liver biopsy was recommended to evaluate liver inflammation and for chronic hepatitis C.
fibrosis, but she refused. She was commenced on pegylated interferon-α2b 80 μg (1.5 μg/kg) weekly by subcutaneous injection and ribavirin 400 mg orally twice daily. Serum HCV RNA level decreased below 25 copies/mL within 12 weeks after the start of interferon, thus she achieved an early viral response.

After 9 months of interferon and ribavirin treatment, the patient complained of blurred vision and headache. On physical examination, the vitiligo around her forehead and scalp was shown (Fig. 1), but there was no sign of meningeal irritation. Optic fundal examination showed uveitis and retinal edema. Retinal fluorescein angiography (Fig. 2) showed leakage of fluorescein dye from the choroid into the subretinal space. The serous retinal detachment was seen clearly in the right eye from optimal coherence tomography (Fig. 3A). Cerebrospinal fluid examination and the magnetic resonance imaging (MRI) to identify the encephalomeningitis showed no abnormal findings. The level of angiotensin-converting enzyme showed normal range, the erythrocyte sedimentation rate and the C-reactive protein were also normal, and the antinuclear antibody and the rheumatoid factor were negative. She was diagnosed as having incomplete VKH disease, therefore pegylated interferon-α2b and ribavirin were discontinued, and intravenous pulses of methyl-

Figure 1. The patient's face before treatment (A). The 5-cm vitiligo on the forehead appears after 9 months of pegylated interferon-α2b and ribavirin combination therapy (B).

Figure 2. Retinal fluorescein angiography reveals characteristic multiple pinpoint leakages of fluorescein from the choroid into the subretinal space on the right eye (A) and the left eye (B).