

Simultaneous HBV Reactivation and Hair Discoloration Under Secukinumab Treatment

Dear Editor,

Viral hepatitis reactivation is one of the safety concerns for treatments based on biological agents. Hepatitis B (HBV) reactivation has been reported more frequently than hepatitis C (HCV) reactivation. It is more common with TNF-alpha inhibitors than with IL-17 inhibitors. The risk is higher, especially in those taking additional immunosuppressive drugs (systemic steroids, methotrexate, etc.) (1).

Hair discoloration is a rare adverse effect observed with some medications. To our knowledge, hair discoloration developing under secukinumab treatment has not been previously reported in the literature. Herein, we describe a case of a patient who developed simultaneous HBV reactivation and hair discoloration under secukinumab treatment.

A 36-year-old male patient was admitted to our clinic with a diagnosis of psoriasis. Secukinumab treatment was initiated, as the patient had not responded to previous treatments with cyclosporine, methotrexate, and ustekinumab. The patient had no known chronic diseases and/or arthritis. Hepatitis serology in baseline examinations before secukinumab treatment was as follows: positive (+) for hepatitis B surface antibodies (Anti-HBs), positive (+) for antibodies to hepatitis B core antigen (Anti Hbc IgG), negative (-) for hepatitis B surface antigen (Hbs Ag), and negative (-) HBV- DNA PCR. The patient was followed up every 3 months with HBV-DNA PCR monitoring, without prophylaxis.



Figure 1. The patient's hair color at baseline (A) and hair discoloration (B) at the second year of secukinumab treatment.

In the second year of treatment, although Hbs Ag was negative and liver transaminase levels were within the normal range in serum, the HBV-DNA PCR test became positive. The reddish discoloration in the patient's hair was also notable (Figure 1). The patient reported that this discoloration had occurred after secukinumab treatment. He reported that he did not dye his hair and did not use any additional medication during this period. Secukinumab treatment was continued, together with entecavir treatment. After using entecavir for three months, the HBV-DNA PCR test became negative. Hair color discoloration persisted during follow-up.

HBV reactivation may occur under biological treatments without Hbs Ag test positivity. Serial HBV-DNA PCR test follow-up is important, especially in patients with Anti-Hbc IgG positivity who do not/cannot receive prophylaxis (1,2).

Changes in hair color and/or structure have mostly been reported with chemotherapy drugs (3). New hair growth and darkening of white hair have been reported with secukinumab, but discoloration has not been previously reported in the literature (4,5). This may be related to the role of inflammatory cytokines in hair follicle development.

However, HBV-DNA positivity has been reported in hair and nail samples in patients with chronic HBV infection (6). It has been demonstrated that iron and copper levels had changed in the hair samples of people with viral hepatitis (7). In one case, straightening of curly hair was reported after HCV treatment (ribavirin + interferon) (8). Therefore, viral infections may also have some cytopathic effects on hair structure and color.

In conclusion, the association of hair discoloration with HBV infection may be coincidental, or it may be an indicator of viral reactivation, as in our case. New studies and case reports are needed on this subject.

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Ece Erbağcı

Uşak University Department of Dermatology and Venereology, Uşak, Turkey

Corresponding author:

Ece Erbağcı

Uşak University

Faculty of Medicine

Department of Dermatology and Venereology

Uşak, Turkey

ece.erbagci@gmail.com