Case Report

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Koilonychia Developed in a Patient with Chronic Hepatitis B During Peginterferon Alfa-2a Treatment

Kronik Hepatit B Hastasında Peginterferon Alfa-2a Tedavisi Esnasında Gelişen Kaşık Tırnak

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ABSTRACT

There are many adverse effects associated with peginterferon alfa-2a (PEG-IFN α-2a) treatment. The most common side effects are flu-like disease, gastrointestinal distress, weight loss, and anemia. Here, we report the case of a patient with chronic hepatitis B who developed spooning (koilonychia) during PEG-IFN α-2a treatment in the absence of anemia. (Viral Hepatitis Journal 2014; 20(3): 138-139)

Key words: Chronic hepatitis B, peginterferon alfa-2a, koilonychia

Conflict of interest: The authors reported no conflict of interest related to this article.

ÖZET

Peginterferon alfa-2a (PEG-IFN α-2a) tedavisine bağlı birçok yan etki mevcuttur. En sık görülen yan etkiler grip benzeri hastalık, gastrointestinal bozukluk, kilo kaybı ve anemidir. Biz burada, PEG-IFN α-2a tedavisi esnasında anemi olmaksızın kaşık tırnak geliştiren kronik hepatit B olgusunu bildiriyoruz. (Viral Hepatit Dergisi 2014; 20(3): 138-139)

Anahtar kelimeler: Kronik hepatit B, peginterferon alfa-2a, kaşık tırnak

Çıkar çatışması: Yazarlar bu makale ile ilgili olarak herhangi bir çıkar çatışması bildirmemişlerdir.

Introduction

Adverse reactions due to peginterferon alfa-2a (PEG-IFN α-2a), such as flu-like symptoms, depression, autoimmune diseases, acute renal failure, and neuropathy have been well documented (1,2). The most common skin and hair disorder associated with this therapy is alopecia, but changes in hair pigments (e.g. discoloration, graying, repigmentation) and appearance (e.g. curling, straightening) have also been reported (3,4,5). Here, we report a patient with chronic hepatitis B who developed spooning (koilonychia) of the left hand middle fingernail and falling off the right big toe nail during PEG-IFN α-2a treatment. We could not find any study reporting koilonychia during PEG-IFN α-2a treatment in the English literature. To our knowledge, this is the first report of koilonychia related to this therapy.

Case

A 44-year-old man had been diagnosed with hepatitis B infection for about one year. His past medical history was normal except for only left-sided hip dysplasia. His laboratory values were as follows: white blood cell count: 6.2 K/uL (N: 4.6-10.2); hemoglobin: 13.8 gr/dL (N: 12.2-18.1), hematocrit: 40.6% (N: 37.7-53.7), mean corpuscular volume (MCV): 87.1 fL (N: 80-97), HBsAg (+), antiHBs (-), HBeAg (-), anti-HBe (+), HBV DNA: 5.396 IU/mL, ALT: 72 U/L, AST: 35 U/L. Laboratory testings for hepatitis C, human immunodeficiency virus and venereal disease were negative. Abdominal ultrasonography revealed fine granular liver parenchyma. According to liver biopsy with modified Ishak scoring system, hepatitis activity index and fibrosis score were found to be 6 and 1, respectively. Then, PEG-IFN α-2a 180 mcg/week was started. At the second month of treatment, spooning appeared on his fingernail and the patient attended the outpatient clinic for this reason. Koilonychia was available on the left hand middle fingernail (Figure 1). At this stage, anemia was absent again, since hemoglobin was 13.1 g/dL, hematocrit was 37.5% and MCV was 87.6 fL. We decided to continue the treatment for 48 weeks along with the cooperation of the patient. After treatment was finished, nail spooning in our patient completely returned to normal (Figure 2).

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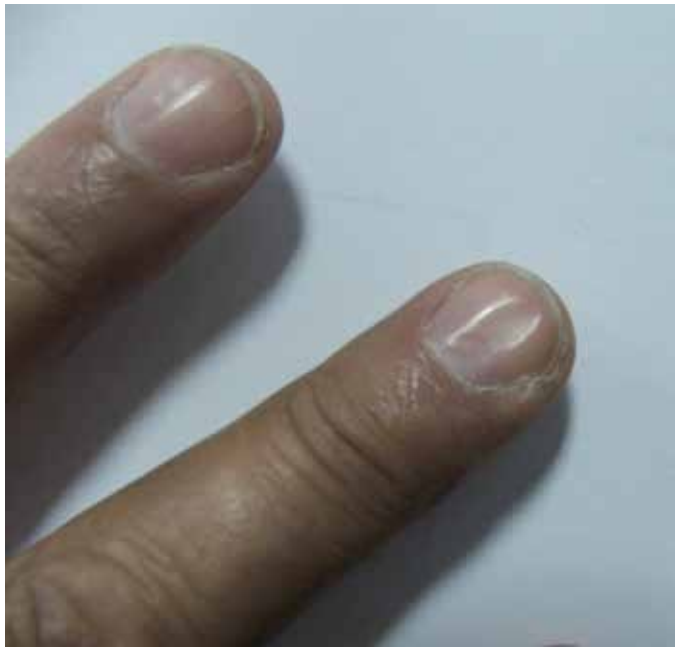

Figure 1. Spooning (koilonychia) of the left hand middle finger nail at two month of PEG-IFN alfa-2a treatment

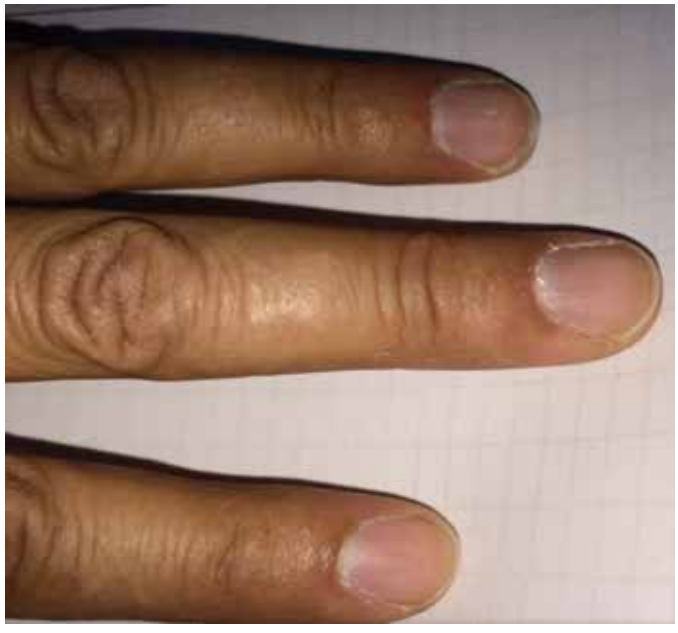

Figure 2. The normal finger nails of left hand after treatment was finished

Discussion

PEG-IFNs have been used in the treatment of both chronic hepatitis B and C in the quarter of century. Their immunomodulatory effects are well estimated, but there are also numerous adverse effects related to the adherence to these powerful drugs. The most common adverse effects are nausea, vomiting, flu-like illness, depression, weight loss, lack of appetite, myocarditis, autoimmune diseases, thrombocytopenia, and anemia (1,2). Skin and hair disorders related to PEG-IFN α-2a, such as alopecia, urticeria, aggravation of psoriasis and trichomegaly have been reported in previous studies (3,4,5). To our knowledge, there is no report in the English language literature regarding PEG-IFN alfa-2a induced koilonychia.

Nail dystrophy can be derived from different mechanisms. It is usually observed in patients with underlying anemia. IFN-γ can lead to anemia accompanied with koilonychia by suppression of eritropoetin (6). However, IFN-α-related koilonychia with or without anemia has not been reported before.

In previous studies, hypertrichosis has been shown to be reversible during hepatitis C treatment with IFN-α and ribavirin (7,8).

The mechanism of PEG-IFN alfa-2a-induced koilonychia is not clearly known, but it may be due to abnormalities of the cytokine network or mutations of PEG-IFN alfa-2a receptors.

In conclusion, we assume that there will be reports on new adverse effects due to PEG-IFN alfa-2a treatment. To our current knowledge, nail side effects associated with PEG-IFN alfa-2a can completely reverse with this long-term treatment.

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