

## Severe Allergic Eczema due to Pegylated $\alpha$ -Interferon may Abate After Switching to Daily Conventional $\alpha$ -Interferon

### To the Editor:

Sustained virologic response can be achieved in the majority of patients with chronic hepatitis C treated with pegylated interferon and ribavirin. However, side effects are common and remain a major cause of treatment discontinuation and subsequent treatment failure. Apart from flulike symptoms, which are the commonest side effects of pegylated interferon, skin disorders are seen frequently. We here describe a patient who developed severe allergic eczema under treatment with pegylated interferon and ribavirin. He was able to continue treatment after switching from pegylated interferon to daily regular interferon, which caused his eczema to abate.

We started treatment with pegylated interferon and ribavirin in a 34-year-old patient with chronic hepatitis C genotype 1. A pretreatment liver biopsy had revealed a mild inflammatory activity and no fibrosis.

The patient had contracted hepatitis C via infected blood products used in the treatment of his hemophilia. Apart from bleeding complications due to his hemophilia the medical history was unremarkable. Patient's only complaint was fatigue and he was healthy on physical examination.

There was a good initial response to the pegylated  $\alpha$ -interferon and ribavirin; the hepatitis C ribonucleic acid (HCV RNA) being undetectable after 8 weeks. By week 12, he developed a rash and started to complain of severe itch. Physical examination revealed a generalized keratotic maculopapular exanthema with unsharp deliniation. Skin biopsy showed strong spongiosis of the stratum spinosum. After dermatologic consultation, the patient was started on clemastine 2 mg and on

topical steroid cream, but this did not relieve the symptoms. The patient now suffered so severely from itch, that he considered to stop the treatment. We decided to switch to a nonpegylated formulation and within 1 week the itch started to decrease and the exanthema resolved. The ribavirin was maintained in the same dose. The patient was able to continue his treatment and he is currently HCV RNA negative.

Pegylated  $\alpha$ -interferon is a polyethylene-glycol-conjugated derivative of conventional  $\alpha$ -interferon, which acts longer and allows for weekly dosing instead of thrice a week.<sup>1</sup> Treatment with pegylated  $\alpha$ -interferon and ribavirin leads to a sustained virologic response, or undetectability of HCV RNA in the serum at 24 weeks after treatment, in 50% to 80% of the patients.<sup>2</sup>

However, side effects are common and remain a major cause of treatment discontinuation and subsequent treatment failure. Apart from flulike symptoms, which are the commonest side effects of pegylated interferon, skin disorders are frequently seen.<sup>3,4</sup>

In our patient, we considered pegylated  $\alpha$ -interferon to be the causative agent as skin reactions to pegylated  $\alpha$ -interferon are common. Dermatitis has been reported among 13% of noncirrhotic hepatitis C patients treated with a weekly dose of 180 mcg pegylated  $\alpha$ -interferon and among 7% of patients treated with conventional  $\alpha$ -interferon.<sup>3</sup> It has been reported that polyethylene-glycol may cause contact urticaria when used as a solvent for antifungal agents.<sup>5</sup> Although itch has been noted as a side effect of ribavirin, a literature search did not provide any reports on ribavirin causing severe skin reactions. Moreover, the serum ribavirin levels in our patient turned out to be within the normal range.

Milkiewicz et al<sup>6</sup> described a hepatitis B patient treated with pegylated  $\alpha$ -interferon and suffering from urticarial lesions, for whom switching to a different form of pegylated  $\alpha$ -interferon did not relieve the symptoms. In contrast to our patient, the

skin reactions of their patient responded well to treatment with topical steroids and antihistamines. Severe skin reactions not responding to treatment with topical steroids and antihistamines, may lead to treatment discontinuation.<sup>7</sup> This markedly reduces the chance of sustained virologic response. In such cases, switching to daily conventional  $\alpha$ -interferon may still allow affected patients to continue their antiviral treatment and reach a sustained virologic response.

In conclusion, severe allergic eczema due to treatment with pegylated  $\alpha$ -interferon may abate after switching to daily conventional  $\alpha$ -interferon.

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