Letter to the Editor

Diffuse and injection site skin reaction in a patient with chronic hepatitis B treated with pegylated interferon

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To the Editor: Pegylated interferon alpha (PEG-IFNa subcutaneous administration) has been recently introduced in the treatment of chronic viral hepatitis B and C. In fact, PEG-IFNa (2a or 2b) alone or in combination with other antivirals resulted in inducing remarkable sustained biochemical, virological and histological responses in these patients.

Adverse skin reactions from PEG-IFNa are relatively frequent, and they are usually local and related to the injection site.[1]

The most usual local reaction is erythema with infiltration at the injection sites but cases with skin ulceration,[2] cutaneous necrosis[3] and cutaneous sarcoidosis[4] have also been reported. Local therapy of these reactions is usually enough to overcome this adverse event.

By contrast, the importance of diffuse, apart from injection site, skin reactions is that they may result in temporary or even definite discontinuation of therapy. Usually, diffuse skin reactions include cases of generalized dermatitis[5-7] but skin hyperpigmentation cases have also been reported.[8] These types of systemic skin reactions during PEG-IFNa therapy have been rarely described in chronic viral hepatitis C[1-2,4-5,7-8] and in a single case of chronic hepatitis B patient.[9]

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We describe herein a case of diffuse and injection site skin reaction in a patient with chronic hepatitis B treated with PEG-IFNa.

A 43-year-old man with chronic viral hepatitis B and otherwise unremarkable history was started on PEG IFNa 2b monotherapy. Three weeks after PEG-IFNa initiation the patient developed local and systemic skin reactions. The type of skin reactions observed was vesicle eryhematous eruptions at the injection sites and pruritic popular erythematous eruptions located on the trunk away from the injection sites.

Histlogical examination was performed on the pruritic eruption of the trunk and showed perivascular infiltration of the dermis with lymphocytes but no signs of vasculitis or any other type of inflammatory process.

Despite administration of topical treatment with corticosteroids and antihistamines as well as systemic antihistamines skin reactions insisted. Interferon therapy was then discontinued and local and systemic therapy temporarily suppressed these reactions. However, as reactions relapsed again after rechallenge with either PEG IFNa 2b or 2a, therapy was discontinued. One month after therapy discontinuation spontaneous regression of the lesions was noted. The patient was subsequently started on lamivudine with good biochemical and virological response on the one-year follow up.

In this case, systemic skin reaction leaded to interferon discontinuation. By contrast, in the other case of chronic hepatitis B and diffuse skin reaction due to PEG-IFNa patient responded very well to topical steroids and antihistamines.[9] The authors of this report suggest that despite the severity of reaction, withdrawal of PEG-IFNa may not always be required because this particular skin reaction may respond well to symptomatic treatment.

IFNa is known to stimulate T helper cells with a Th-1 profile immune response, which is the key immunologic event in many cutaneous but also other systemic reactions. Nevertheless, many mechanisms still need further elucidation. We believe that an individualized approach in these systemic reactions to interferon represents one of the mainstays in the therapeutic management of chronic viral hepatitis. In fact, in some patients, skin reactions to interferon represent a simple and easily manageable type of adverse event, while in others may represent alarming signs of a disregulated and thus difficult to manage immune reaction.

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Erratum: Katsanos KH et al 2009;22(2):132 in summary line 5, instead of 'esophago-bronchial fistula' please read "foreign body sensation".