Psoriasis affects nearly 125 million people worldwide, and medical co-morbidities often complicate treatment. Hepatitis C (HCV) is known to worsen psoriasis both by natural disease mechanisms and as a consequence of IFN-α treatment, which is well documented to result in psoriasis flare. In the past, patients with HCV and psoriasis have been safely treated with retinoids, although other common systemic medications are relatively contraindicated due to hepatotoxicity and immunosuppressant effects. For psoriasis patients in general, Goeckerman outpatient day programs continue to offer high rates of clearance. We describe the case of a patient with HCV and severe, generalized psoriasis who “turned around” with Goeckerman therapy in combination with a low-dose retinoid followed by successful outpatient phototherapy maintenance.

Introduction

Psoriasis, an inflammatory condition affecting two to three percent of the US population, usually peaks around the age of 22.5 years, although late presentations may occur around 55 years.1-3 Hepatitis C virus (HCV) is estimated to affect nearly 170 million people worldwide and is the leading cause of liver cirrhosis, end-stage-liver disease, hepatocellular carcinoma, and liver transplantation.4 Studies demonstrate that HCV infections induce immunologic abnormalities that trigger psoriasis and psoriatic arthritis, while IFN-α treatment additionally may cause psoriasis flares.5-9

HCV can cause chronic liver disease, and many systemic psoriasis medications are potentially hepatotoxic, creating a management challenge for dermatologists. For example, methotrexate is hepatotoxic and also acts as an immunosuppressant.3 In patients with HCV and psoriasis, it is preferable to prescribe a therapeutic regimen that will not downregulate the immune system, cause alterations in liver enzymes, or induce functional hepatic impairment.

Case Report

A 62-year-old Caucasian male presented for Goeckerman therapy at the Psoriasis Treatment Center. He reported a 10-year history of plaque-type psoriasis, previously treated with topical corticosteroids and vitamin D and tar shampoo without appropriate response. He reported a family history of psoriasis. His co-morbidities included a 10-year history of HCV infection, genotype 3A. Further questioning revealed that upon initial HCV diagnosis, the patient started therapy with IFN-α, 6 million units IM injections, three times a week for six months. He reports that on day 1 following the first injection, he developed a single psoriatic lesion. By the following week, his psoriasis had become generalized. Prior to IFN-α therapy, the patient never had psoriasis. Moreover, every subsequent IFN-α injection caused psoriasis flare. After this IFN-α trial, his viral load did not decrease to expected levels and he was labeled a “non-responder.” Therapy was discontinued. Without weekly IFN-α, the patient’s psoriasis improved over the next 10 years but remained generalized despite topical therapy.

The evolution of pegylated IFN-α (PEG-IFN) brought a new option to previous IFN-α non-responders. In May 2009, the patient received his first PEG-IFN injection. Subsequently, his psoriasis flared again to cover over 30 percent of his body. He presented to the Psoriasis Treatment Center...
shortly thereafter. Upon starting Goeckerman outpatient therapy in August 2009, the patient immediately noticed no further psoriasis flare despite continued weekly PEG-IFN injections and oral acitretin. Psoriasis intervention included narrow-band UVB radiation (NB-UVB) at 65mJ, gradually increased to 130mJ according to tolerability, 2% crude coal tar (CCT) in petrolatum to the body in the morning (excluding intertriginous areas), desonide cream 0.05% to the axillae and groin as needed for erythema or pruritus, 20% coal tar (LCD) in Neutraderm to the scalp in the morning, 20% LCD in Aquaphor during daily treatments and at bedtime, and triamcinolone 0.1% ointment to affected areas as needed for erythema or pruritus. Combination therapy with low-dose acitretin 25mg daily was initiated to enhance therapeutic efficacy with NB-UVB.

After discharge on day 28 of outpatient Goeckerman therapy, the patient had 95 percent clearance of lesions. Discharge instructions were as follows: outpatient NB-UVB three times weekly, clobetasol ointment for new lesions, triamcinolone 0.1% ointment BID, 20% LCD in Aquaphor QHS, 20% LCD in Neutraderm to the scalp under occlusion, and 25mg acitretin daily. He continued to receive PEG-IFN injections with ribavirin on a weekly schedule without psoriasis flare. Three months after discharge, good control of psoriasis was maintained.

Discussion

Known triggers for psoriasis, which vary among individuals, may include emotional stress, injury to the skin, infectious agents, and medication reactions. In the case of our patient with genetic susceptibility to psoriasis, his initial flare was induced by infection with HCV and subsequent IFN-α injections.

HCV-affected patients who have previously failed a six-month treatment regimen with IFN-α are classified as either “relapser”—a decreased HCV viral load following treatment, but then gradually resume infected status—or “nonresponders.” Data suggests that previous “relapser” may benefit from new treatment with PEG-IFN and ribavirin, while previous “nonresponders” (i.e., our patient) are unlikely to achieve equal remission. Accordingly, our patient will likely have to continue weekly PEG-IFN for maximal HCV treatment. Due to his history of psoriasis flare with IFN-α injections, it was important to provide maintenance therapy with the goal of controlling future psoriasis flares due to weekly PEG-IFN treatments.

While acitretin offers improvement to patients with co-morbid HCV, Goeckerman therapy remains one of the most effective treatment options for psoriasis. In a publication of 25 patients with very recalcitrant psoriasis who were treated with Goeckerman therapy, 100 percent achieved PASI 75 by week 12. In other studies of psoriasis patients treated with 40-50mg/day acitretin, 34 to 52 percent of subjects achieved PASI 75 at week 12. Our patient started Goeckerman therapy supplemented with daily low-dose acitretin, as both are effective for psoriasis and offer low risk of hepatotoxicity with no documented risk of immunocompromise. Clinical trials have demonstrated the effectiveness of combination therapy with acitretin and NB-UVB for increased psoriasis clearance.

References