

CML. After an observation period of eight months following initiation of prednisone treatment, our patient is in partial remission of systemic sarcoidosis and maintains a complete cytogenetic remission of her pre-existing CML.

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Key words

Chronic myelogenous leukemia, interferon- α , side effect, sarcoidosis, corticosteroids.

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Peri-lesional injections of granulocyte-macrophage colony-stimulating factor in the management of chronic leg ulcers in type II mixed cryoglobulinemia

We report the good effects obtained with local injection of recombinant human granulocyte-macrophage colony-stimulating factor (rhGM-CSF)

in three patients with hepatitis C-virus related type II cryoglobulinemia whose chronic leg ulcers, that caused pain and disability, would not heal despite the wide variety of treatments previously applied.

Sir,

Mixed type II cryoglobulinemia is manifested as vascular purpura in all patients at some time during the course of the disease. Severe involvement around the malleoli often precedes the development of leg ulcers.¹

Chronic leg ulcers in patients with type II cryoglobulinemia may represent a problem; the treatment is directed primarily at the underlying disease, the care of these patients is often disappointing and persistent leg ulcers often prove resistant to a plethora of local conservative measures.² Peri-lesional injections of recombinant granulocyte-macrophage colony-stimulating factor (rhGM-CSF) improved the healing of biopsy wounds in 35 patients with leprosy³ and induced the closure of Kaposi's sarcoma lesions in one patient;⁴ beneficial effects were obtained also in chronic leg ulcers of patients with hemoglobinopathies.⁵ We report the effects of local injection of rhGM-CSF (Mielogen-Molgramostim; Schering-Plough) in three patients with hepatitis C virus (HCV)-related type II cryoglobulinemia whose chronic leg ulcers would not heal despite the wide variety of treatments applied.

Patient #1 was a 65-year old woman who had had a chronic painful ulcer on the left ankle (3.2x2.7 cm) for 6 months.

Patient #2 was a 62-year old woman who had had two deep ulcers, one on her left ankle (3.7x3.2 cm) and one on the dorsum of the left foot (2.5x2.2 cm), for 10 months.

Patient #3 was a 69-year old man; he had had two ulcers on his right leg (2.5x1.5 cm and 1.5x1.3 cm) for the past 3 years. All these patients had HCV-related type II cryoglobulins with non-Hodgkin's lymphoma: diffuse large cell lymphoma in complete remission (CR) for 3 years (patient #1), gastric MALT lymphoma in CR for 5 years (patient #2), immunocytoma in partial remission (patient #3).⁶ The three patients had an IgM- κ paraprotein which behaved like a cryoglobulin. Treatments with α -interferon (IFN) 3 MU three times a week for 3 months and subsequently intermediate doses of cyclophosphamide, prednisone and plasmapheresis were ineffective and the chronic ulcers caused pain and disability in all three patients. GM-CSF (Mielogen-Molgramostim; Schering-Plough) 300 mg was injected subcutaneously into four sites within the margins of the wounds, in approximately equal amounts, in the four quadrants of each ulcer, through a insulin syringe needle, twice a week for 2 months. In some instances, a small quantity of the solution was applied over the open ulcer. The injections were quite painful, but were well tolerated in all 3 patients; no other side effects were recorded and complete resolution of the ulcers was seen. In the first and second patients, the ulcers healed after 6 weeks (Figure 1); the ulcers of patient #3 required approximately 2 months to heal completely. We believe that subcutaneous peri-lesional injections of GM-CSF may play an important



Figure 1. The two chronic ulcers in patient #2 (A) before and (B) after treatment with peri-lesional injections of granulocyte-macrophage colony-stimulating factor.

role in the cure of chronic leg ulcers in patients with type II mixed cryoglobulinemia.

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Key words

Type II mixed cryoglobulinemia, leg ulcers, molgramostim GM-CSF, non-Hodgkin's lymphoma, hepatitis C virus.

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