

## Remission of Psoriasis 13 Years After Autologous Stem Cell Transplant

To the Editor:

Remission of psoriasis after bone marrow transplant has been reported<sup>1</sup>; however, follow-up typically has been limited. We describe a case of a remote recurrence of psoriasis 13 years after autologous stem cell transplant.

In September 1997, a 48-year-old woman with a 20-year history of moderate to severe plaque psoriasis, previously managed with oral methotrexate (up to 30–40 mg weekly), presented to her primary care physician with a persistent cough and newly pervasive arthralgia and myalgia. A complete blood cell count showed a white blood cell count of 6.9 mg/dL (reference range, 3.8–10.8 mg/dL), hemoglobin level of 11.6 mg/dL (reference range, 11.7–15.5 mg/dL), and hematocrit level of 34% (reference range, 35.0%–45.0%). Bone survey demonstrated a 4×2-cm lytic expansile lesion in the occipital bone, and a bone marrow aspirate and biopsy revealed 40% plasma cells. She was subsequently diagnosed with stage IIIA IgA  $\lambda$  and free  $\lambda$  light chain multiple myeloma with an IgA level of 62.1 g/L (reference range, 1.24–2.17 g/L).

Therapy was initiated with dexamethasone in combination with pamidronate and she was transitioned to cyclophosphamide chemotherapy. A peripheral autologous blood stem cell transplant followed. Throughout her initial treatment, the psoriasis continued to flare and she remained on methotrexate to help maintain control of the skin disease.

In November 1998, the patient underwent an autologous CD34<sup>+</sup> stem cell transplant. There were no complications following the transplant and the multiple myeloma has remained in complete remission to date. Following the stem cell transplant, the

patient remained free of psoriatic disease for just over 13 years without any intervention. Recurrent erythematous plaques with thick scale on the bilateral lower legs prompted her return to dermatology in August 2011. To date, she continues to note intermittent though mild flares of her psoriasis. She has responded well to methotrexate 7.5 mg weekly and clobetasol propionate ointment 0.05% as needed with satisfactory control of her disease.

The development of autoimmune disease following an allogenic bone marrow transplant such as psoriasis, thyroiditis, myasthenia gravis, insulin-dependent diabetes mellitus, and vitiligo has been well described.<sup>2–4</sup> The causal relationship between allogenic hematopoietic stem cell transplant (HSCT) and subsequent autoimmune disease has been attributed to T cells and passive transfer of autoimmune disease from the donor to the recipient.<sup>1</sup>

In the case of autologous HSCT, the remission of autoimmune disease thereafter has been attributed to myeloablative conditioning, whereby high-dose chemotherapy eliminates self-reactive lymphocytes, resulting in ablation of peripheral reactive and alloreactive T cells with depletion of thymus and reactive B cells.<sup>1</sup>

In 1997, Cooley et al<sup>5</sup> described 4 patients with autoimmune disease who experienced complete but temporary (up to 26 months) remission following autologous bone marrow or stem cell transplant. A comprehensive review of psoriasis cases that resolved after HSCT published by Kaffenberger et al<sup>6</sup> in 2013 cited 6 cases of autologous and 13 cases of allogenic transplant that resulted in resolution of psoriatic disease. Recurrence of disease was witnessed in 3 of 13 allogenic HSCT patients and 5 of 6 autologous HSCT patients. Of note, all 5 of these patients developed recurrent disease within 24 months following autologous HSCT, albeit with more benign disease.<sup>6</sup>

Similar to those cases presented by Kaffenberger et al,<sup>6</sup> our patient's psoriatic disease was notably mild compared to her disease prior to HSCT. Although an unintended but welcome outcome of multiple myeloma treatment, the nearly quiescent nature of her skin disease following autologous HSCT has led to a dramatic improvement in her quality of life.

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We highlight a unique case in which psoriatic skin disease recurred more than 1 decade after autologous HSCT.

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