Letter to the Editor

Eosinophilic Fasciitis After Taking Simvastatin

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To the Editor:

Eosinophilic fasciitis is a rare fibrosing disease characterized by painful, symmetric inflammation of the limbs, and progressive induration of the skin. In some cases, it can also lead to debilitating joint contractures, arthritis, neuropathy, and myositis. The hallmark histologic finding is fascial fibrosis. While eosinophilic fasciitis is considered by some to be a variant of morphea or scleroderma, others believe it to be a separate entity. The condition is of unknown etiology but it has been associated with a variety of disease processes as well as with exposure to environmental factors, toxins, and certain drugs.

We present the case of a 71-year-old woman with a history of osteoporosis under treatment with bisphosphonates and primary hypercholesterolemia under treatment with simvastatin.

The patient presented with progressive induration of the skin on her arms and legs that had appeared 9 months earlier. She also had asthenia and dyspnea on moderate exertion. The symptoms had appeared 3 weeks after initiation of simvastatin and worsened progressively until the drug was withdrawn 1 month later. The symptoms then stabilized but did not improve.

References
Physical examination revealed erythema, induration, and dimpling of the skin on the arms and, particularly, on the legs (Figure 1). There was no evidence of acrosclerosis or of any other skin lesions.

The only other remarkable findings in the laboratory workup were slight eosinophilia (0.65 × 10^9/L) and an elevated erythrocyte sedimentation rate (27 mm/h). All other blood count and biochemistry test results were normal, and the results of serology tests and analysis of rheumatoid factor were negative.

A biopsy of the deep skin layers revealed fibrosis involving the reticular dermis, the septa of the superficial fascia, and reaching the striated muscle; there was also a perivascular and interstitial lymphocytic infiltrate (Figure 2).

Because the clinical and histology findings were suggestive of eosinophilic fasciitis, the patient was administered prednisone (60 mg/d) and methotrexate (5 mg/wk), leading to a gradual improvement of symptoms. Although the cause of eosinophilic fasciitis is unknown, there are several reports of patients developing it after intense physical exercise. It has also been associated with various hematologic diseases, kidney diseases, infections by *Borrelia burgdorferi*, and the administration of certain drugs.

In our case, the fact that the onset of symptoms was temporally associated with the use of simvastatin and that there were no other potential causative factors suggests that this drug might have triggered the condition.

Two studies have previously reported an association between eosinophilic fasciitis and 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase inhibitors, and there is growing evidence that, in addition to reducing atherogenesis and cardiovascular morbidity, these inhibitors may have immunomodulatory properties. They reduce the production of proinflammatory type 1 helper T (T\(_{h1}\)) cells and induce differentiation towards T\(_{h2}\) cells. For this reason, HMG-CoA reductase inhibitors might trigger or exacerbate certain autoimmune diseases such as myasthenia gravis, dermatomyositis, polyomyositis, lupus-like syndrome, and lichen planus pemphigoides. They might also, however, be useful for treating other autoimmune diseases and preventing graft rejection in patients who have undergone transplants.

References