Alendronate-Induced Lichen Planus

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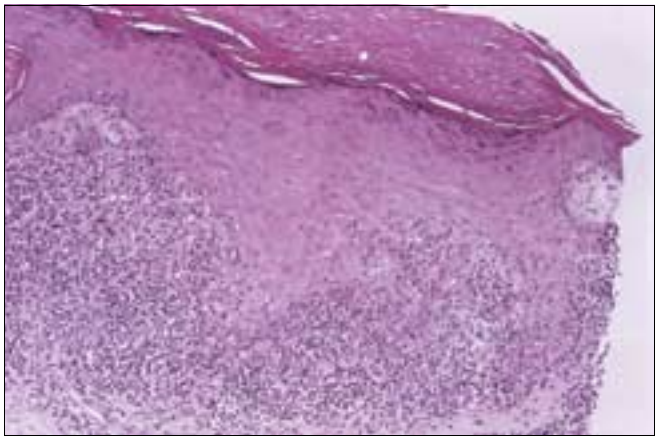
Alendronate is an oral amino derivative of the bisphosphonates, used for the treatment of bone diseases characterized by increased osteoclastic resorbtion. It is widely used for the prevention and treatment of osteoporosis, as well as for reducing pain and hypercalcemia in malignant neoplasms of the bone, Paget's disease and several other conditions. Gastrointestinal symptoms are the most frequent side effects observed during treatment with alendronate. Reports in the literature of cutaneous side effects are scarce. We describe a patient with osteoporosis who developed hypertrophic lichen planus during treatment with alendronate.

Patient Description

A 54 year old woman attended our outpatient clinic due to an itching rash on her trunk and extremities. The rash appeared 5 months prior to her consultation, and 2 months after the beginning of treatment with alendronate (Fosalan M.S.D) for osteoporosis. The patient was otherwise healthy and was not taking any other medications or food supplements.

On dermatologic examination, livid flat papules as well hypertrophic prurigo-like papules were seen on her sacrum, flexural aspect of the arms and on the lower extremities. The oral and genital mucosae were not affected. The clinical features were compatible with hypertrophic lichen planus. Laboratory investigations including complete blood count, liver and kidney



Typical features of hypertrophic lichen planus (Hematoxylin & eosin x 25)

function tests, antinuclear antibodies, complement 3 and 4, aspartate aminotransferase, serology for hepatitis A, B and C, viral serology for Epstein-Barr virus and cytomegalovirus and serology for syphilis (VDRL) were all normal or negative. Patch testing with the standard series (TRUE Test) was negative. The histopathologic findings from a lesional biopsy demonstrated hyperkeratosis, hypergranulosis and marked acanthosis [Figure]. A dense, band-like, lymphocytic infiltrate at the dermo-epidermal junction and in the upper dermis was seen. Vacuolar degeneration and eosinophilic Civatte bodies were observed at the basal layer. The histopathologic features were those of hypertrophic lichen planus. Clinically drug-induced hypertrophic lichen planus was suspected.

Withdrawal of the incriminated drug, alendronate, and treatment solely with a topical steroid resulted in complete resolution of the lesions within 3 weeks. On follow-up no relapse of the lichen was observed for more than one year after withdrawal of the offending drug. The patient refused any further investigations including provocation tests or *in vitro* testing.

Comment

Drug-induced lichen planus is often very similar to idiopathic lichen planus [1]. Identification of a drug as an etiologic agent for lichenoid drug eruption is crucial for successful treatment, namely withdrawal of the offending drug. Our patient presented with lesions resembling hypertrophic lichen planus distributed symmetrically on the trunk and extremities but with no mucosal involvement. The symmetric distribution and sparing of the mucous membranes have been described as clinical features that are observed more frequently in lichenoid drug eruptions [1]. The histopathologic features in our case were compatible with hypertrophic lichen planus. These hypertrophic lesions could be the result of severe and constant rubbing of the skin, induced by the severe pruritus experienced by the patient.

The latent period before the onset of the eruption, the complete resolution of the pruritus and the hypertrophic lichen planus only 3 weeks after withdrawal of the incriminated drug, as well as the lack of recurrence after discontinuing treatment with the offending drug, led us to the diagnosis of alendronate drug-induced lichen planus.

Furthermore, in our patient there was no evidence of other etiologic agents related to lichen planus, such as bacterial and viral infections, systemic disease or contact allergy.

Cutaneous adverse effects to alendronate reported in the literature are few, and include pruritus, petechiae, fixed drug eruption, hypersensitivity, dysgeusia [2], rash [3] and allergic reaction [4]. Recently there has been a report of patients with oral ulcerations [5] that were caused by direct mucosal injury from the drug.

Although spontaneous remission could occur in the course of lichen planus, in our patient the clinical features, the prompt resolution of the lichen after withdrawal of the offending drug, and the lack of recurrence are arguments in favor of a drug eruption. Our patient appears to be the first one with a lichen planus induced by alendronate.

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