Lichenoid Drug Reaction Due to Sildenafil

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Lichenoid drug eruptions are difficult to distinguish from lichen planus. Determining the offending agent is complicated by the proliferation of lifestyle medications that the patient may not consider a medication. A case of lichenoid drug eruption due to sildenafil, which was taken for sexual enhancement, is presented.

Numerous drugs have been implicated as causes of lichenoid drug eruption. Differentiating a lichenoid drug eruption from lichen planus can be challenging clinically as well as histologically. To aid this, a clinician must be familiar with common medications linked to lichenoid drug reactions. The recent proliferation of lifestyle drugs, which many patients do not consider medications, complicates making an accurate diagnosis. A case of lichenoid drug eruption due to intermittent taking of sildenafil for sexual enhancement is reported.

Case Report

A 44-year-old black male presented with a pruritic eruption of 3 weeks on the sacrum and the extremities. He denied any medical problems and stated that he did not take any medication. On examination, he had a moderate number of 5- to 10-mm violaceous flat-topped scaly papules and plaque on sacrum and distal extremities. A diagnosis of lichen planus was made and he was treated with fluocinolone 0.025% cream twice daily. The eruption resolved over the course of 6 weeks.

He returned to the office 2 months later with a recurrence of his previous eruption. A more detailed history was taken and the patient admitted to taking sildenafil, which he did not think was a medication, intermittently for sexual enhancement. He took the sildenafil 2 to 3 weeks before the present skin eruption appeared, as well as several months before his initial presentation. A punch-biopsy was performed, which showed a band-like lymphocytic eruption containing eosinophils at the dermo-epidermal junction, hypergranulosis, and basilar vacuolization. The infiltrate extended to the blood vessels in the mid-reticular dermis. Screening laboratory tests revealed abnormalities. The patient discontinued sildenafil and the eruption rapidly resolved over a 2-week period.

The next month, the patient took sildenafil again in a drug rechallenge. One week later, the same violaceous flat-topped papules appeared on the sacrum and extremities. This eruption also resolved over the course of 2 weeks once the medication was discontinued. He has avoided sildenafil for 6 months and the eruption has not reappeared. A diagnosis of lichenoid drug eruption due to sildenafil was made upon clinical presentation, resolution upon discontinuation, reappearance with rechallenge, and histopathologic features.

Comments

Sildenafil is a phosphodiesterase type 5 inhibitor that aids the attainment of erection and is indicated for erectile dysfunction. The physiologic mechanism of penile erection depends on the release of nitrous oxide upon sexual stimulation. Nitrous oxide then activates adenylate cyclase, which results in increased levels of guanosine monophosphate, producing relaxation of the corpus cavernosum and allowing it to fill with blood. Phosphodiesterase type 5 is responsible for degradation of cyclic guanosine monophosphate, which produces smooth muscle relaxation. Sildenafil does not directly affect the corpus cavernosum but enhances the effect of nitrous oxide by preventing the degradation of guanosine monophosphate.

A variety of side effects have been attributed to sildenafil such as headache, flushing, nasal congestion, and abnormal vision. It has also been shown to potentiate the hypotensive effects of nitrates, and coadministration of these medications is contraindicated. Skin rashes but not lichenoid drug eruptions have been reported previously to the manufacturer (Pfizer, personal communication). A review of the lit-

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erature did not reveal any published drug eruptions linked to sildenafil. To our knowledge, this case is the first to describe a lichenoid drug reaction to sildenafil and the first to be confirmed by rechallenge.

Phosphodiesterase inhibitors are not among the common causes of lichenoid drug reactions. More common systemic drugs that can induce this reaction include gold, antimalarials, penicillamine, and β-blockers. Halevy and Shai[1] reported a latent period with a mean of 12 months. Quinacrine and simvastatin were reported to have a latent period as short as 4 weeks.[2,3] Our patient had a latent period of 1 to 2 months and developed flares 1 to 2 weeks after reinitiating treatment. Our case is unusual because the medication was taken intermittently instead of continuously as in most described cases. It is noteworthy that the patient did not initially disclose taking this medication, not considering it a medication because: 1) he did not take it every day; and 2) he used the drug for lifestyle reasons.

It is difficult to differentiate lichenoid drug eruptions from idiopathic lichen planus. The morphology and location tend to be similar, although drug-induced cases may be more psoriasiform. The classic findings indicative of lichenoid drug eruptions include eosinophils in the inflammatory infiltrate, focal parakeratosis, and an infiltrate around the deep vessels.[4] Most of these features were found in the patient's biopsy.

The first case of sildenafil-induced lichenoid drug eruption is described. The need to take a thorough history, including identifying lifestyle drugs that the patient may not consider to be medication, is stressed. More causes of drug eruptions can be identified by including discussion of lifestyle drugs with the patient.

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