Palmar psoriasis, a rare side effect of beta-blocker theraphy: a case report

Palmar psoriasis, beta bloker tedavisinin nadir ancak rahatsız edici bir yan etkisi: Olgu sunumu

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Summary– A 45-year-old woman presented to our outpatient clinic with reddish eruptions in both palms. We have learned that she was prescribed metoprolol at another medical center to treat new onset hypertension. On her physical examination there were no associated lesions on the body. All other physical findings, as well as blood chemistry, urine analysis, and complete blood count, were found to be normal. After her consultation with the dermatology department, palmar psoriasis due to metoprolol therapy was diagnosed. The personal and family history of the patient yielded no history for psoriasis. Metoprolol therapy was withdrawn and topical treatment with corticosteroid was recommended. The patient has returned to the clinic subsequently, with no recurrence of the lesions. Psoriazis is one of the rare side effects of beta-blocker therapy.

Özet– Kırk beş yaşında kadın hasta her iki avuç içinde kırmızı döküntü yakınmasıyla polikliniğimize başvurdu. Hastanın öyküsünden yeni tanı hipertansiyon nedeni ile birbaşka merkezde metoprolol tedavisine başladığı öğrenildi. Fizik muayenede vücudunun başka bir bölgesinde benzer lezyonlar gözlenmedi. Diğer fizik muayene bulguları, biyokimya, idrar ve tam kan analizleri normaldi. Dermatoloji kliniği ile konsülte edilen hastaya metoprolol tedavisine bağlı palmar psoriazis tanısı kondu. Öyküsünden ailesinde ve kendisinde öncesinden psoriazis olmadığı öğrenildi. Hastanın metoprolol tedavisi kesildi ve topikal kortikosteroid başlandı. Hastanın izleminde lezyonlarda tekrarlama görülmedi. Psoriazis betabloker tedavisinin nadir bir yan etkisidir.

Psoriasis is a common, chronic inflammatory disease of the skin and joints with an estimated prevalence of 0.6% to 4.8%.[1,2] Although pathogenesis involves a complex interaction between genetics and the immune system,[3] instigating factors such as smoking, alcohol consumption, trauma, stressful life events and drugs such as Beta (β)-blockers can play role in the induction or exacerbation of the immune reaction.[4,5]

Abbreviation:

c-AMP Cyclic adenosine monophosphate

In this case report, we present a case of new onset psoriasis induced by a small dose of β-blocker therapy in a patient with no previous personal or family history of psoriasis.

CASE REPORT

A 45-year-old woman was admitted to our clinic with the diagnosis of new onset hypertension. She was prescribed 25 mg metoprolol by another center. Following 12-lead electocardiography, routine blood and urine tests and echocardiographic examination and, the attending physician decided to continue the existing treatment. After one month of treatment, the patient presented to our outpatient clinic with reddish eruptions in both palms (Fig. 1). On her physical examination, there were no associated lesions on the body. All other physical findings, as well as blood chemistry, urine analysis, and complete blood count,

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Figure 1. Palmar psoriasis in a 45-year-old women.

were found to be normal. After her consultation with the dermatology department, palmar psoriasis due to metoprolol therapy was diagnosed. The personal and family history of the patient yielded no history for psoriasis. Metoprolol therapy was withdrawn and topical treatment with corticosteroid was recommended. An alternate antihypertensive agent, a nondihydropyridine calcium channel blocker, was prescribed for the patient. In about two weeks, the patient's lesions were totally healed. The patient has been examined subsequently, with no recurrence of the lesions.

DISCUSSION

The benefits of β-adrenergic blockers have been confirmed by numerous studies and meta-analysis. They are widely used for the management of many cardiovascular situations, particularly in hypertension, heart failure, chronic coronary heart disease, and acute coronary syndromes.[6] Although known common side effects of β-adrenergic blockers are primarily manifest in the pulmonary, cardiac and central nervous systems,[6] there are additional rare side effects. [7] Psoriazis is one of the rare side effects of β-blocker therapy. Numerous case series have reported a possible association between the use of β-blockers and the induction or exacerbation of psoriasis, including case reports involving eye drops containing timolol.[7-9]

Although several hypotheses have been proposed, the precise pathogenic mechanism explaining the influence of β-blockers on the course of psoriasis is unknown. A possible mechanism may be related to a decrease in intraepidermal cyclic adenosine monophosphate (c-AMP) with the blockage of epidermal β-receptors. This intraepidermeal decrease of c-AMP results in reduced intracellular calcium concentrations. This reduction may in turn cause an accelerated proliferation of keratinocytes or polymorphonuclear leukocytes, both of which may play a role in inducing or exacerbating psoriasis.[10,11]

Herein, we present a case of β-blocker related palmo-plantar psoriasis occurring subsequent to a small dose of metoprolol with an atypical presentation. Psoriasis is an extremely rare side effect of β-blocker drugs. Withdrawal of the therapy generally results in the healing of the reaction. Therefore, we suggest that β-blockers should be replaced with an alternative treatment in all patients in whom psoriasis has developed or worsened during therapy. However, we also want to emphasize that having a history of psoriasis or experiencing inflammation during β-blockade therapy is not an absolute contraindication to β-blocker therapy.

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