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REVISION

Photosensitivity Due to Thiazides☆

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Abstract Thiazides are widely used diuretics that first became available in the 1950s. The first reports of photosensitivity reactions to thiazides were published shortly after the introduction of these drugs, but few cases have been described since.

We review all the cases of photosensitivity due to thiazides published up to December 2011. We found 62 cases, 33 in women and 29 in men. The most common presentation was eczematous lesions in a photodistributed pattern, and the most common causative agent was hydrochlorothiazide. The results of photobiological studies were published in only some of the cases reviewed. In most cases, phototesting revealed an abnormal response to UV-A alone or to both UV-A and UV-B. In some cases, the results of phototesting were normal and only photopatch testing yielded abnormal results.

Diagnosis of photosensitivity due to thiazides requires a high degree of suspicion. Ideally, diagnosis should be confirmed by a photobiological study.

PALABRAS CLAVE
Tiazidas;
Fotosensibilidad por fármacos;
Fototest

Fotosensibilidad por tiazidas

Resumen Las tiazidas son diuréticos que se comenzaron a usar en la década de 1950 y su uso está muy extendido en la actualidad. Poco después de su introducción se describieron las primeras reacciones de fotosensibilidad, aunque han sido descritas solo de forma infrecuente con posterioridad.

Revisamos los casos de fotosensibilidad por tiazidas publicados hasta diciembre de 2011. Encontramos 62 casos, de los cuales 33 eran mujeres y 29 varones. La forma de presentación más común fue con lesiones eccematosas fotodistribuidas. La hidroclorotiazida fue el agente causal más frecuente. Solo algunos casos publicados recogen el resultado del estudio fotobiológico. En la mayoría el fototest mostró un respuesta alterada a ultravioleta A (UVA) sola y a

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UVA + ultravioleta B (UVB). En algunos casos el fototest fue normal y solo el fotoparche estaba alterado.

El diagnóstico de fotosensibilidad por tiazidas requiere un alto índice de sospecha. De forma ideal debería confirmarse mediante estudio fotobiológico.

Introduction

Thiazides have been used in the treatment of arterial hypertension since the late 1950s. This class of drugs includes hydrochlorothiazide, chlorothiazide, chlortalidone, metozalone, bendroflumethiazide, trichlormethiazide, and indapamide. Thiazides achieve an antihypertensive effect by means of direct vasodilatation and inhibit the sodium-chloride cotransporter in the distal convoluted tubule, giving rise to salt and volume depletion.[1]

The chemical structure of thiazides is derived from that of the sulfonamides, molecules containing a sulfonyl group connected to an amine. This structure is common to many drugs that are otherwise different in terms of structure, molecular weight, and properties. Some sulfonamide-derived drugs, such as dapsone and some oral antidiabetic agents, have photosensitizing potential.[2]

Drug-induced photosensitivity is determined by the capacity of some medications to modify an individual's sensitivity to solar radiation or artificial light.[3,4]

Photosensitivity reactions are a growing problem in dermatology. Although new molecules are tested prior to their introduction on the pharmaceutical market, there continue to be new reports of photosensitivity reactions as an adverse effect.[3,5]

Thiazide diuretics are among the drugs that most frequently cause photosensitivity reactions.[5] The prevalence of clinical photosensitivity in patients receiving treatment with thiazides is estimated at between 1 and 100 per 100 000 patients.[6] However, despite being widely used, thiazides have received little attention in the literature.

The first thiazide-induced photosensitivity reactions were reported shortly after the introduction of these drugs.[7,8] Hydrochlorothiazide, the most commonly used thiazide, is implicated in most cases of thiazide-induced photosensitivity.[6] Other clinical manifestations of thiazide-induced photosensitivity are vasculitis,[9] lichenoid reactions, and erythema multiforme.[10]

Clinical Manifestations

Systemic thiazide-induced photosensitivity reactions present clinically as dermatoses with a symmetrical distribution in sun-exposed areas with localized lesions on the face, the upper chest, the dorsal aspect of the forearms, and the hands (Fig. 1). There are usually well-defined borders between the affected sun-exposed areas and the areas covered by clothing, jewelry, glasses, watches, etc. (Fig. 2).[3,10,11] However, disseminated lesions have also been reported.[10]

Figure 1 Scaly, erythematous lesions located predominantly in sun-exposed areas (face, upper chest, dorsal aspect of arms, and hands) in a patient with hydrochlorothiazide-induced photosensitivity.

The following clinical manifestations of thiazide-induced photosensitivity have been reported to date:

a) Erythema. Clinically very similar to the erythema of sunburn. Patients may report burning and/or itching sensations, in some cases very intense.[10]
b) Eczema. Scaly, erythematous plaques with an eczematous appearance.[12]
c) Subacute cutaneous lupus erythematosus (SCLE)–like eruptions. Scaly, erythematous plaques that are clinically and histologically indistinguishable from idiopathic SCLE. In addition, anti-Ro/SS-A and anti-La/SS-B

Figure 2 Erythematous macular lesions on the legs and dorsum of the feet in a patient with hydrochlorothiazide-induced photosensitivity. Note the well-defined borders with the healthy skin that was covered by the shoes.