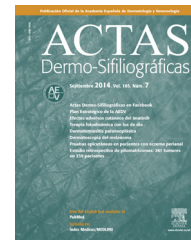




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ORIGINAL ARTICLES

Corticosteroid Hypersensitivity Studies in a Skin Allergy Unit[☆]



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KEYWORDS

Allergic contact dermatitis;
Patch tests;
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Abstract

Introduction: Corticosteroids can cause hypersensitivity reactions, particularly delayed-type allergic reactions. A new classification system for testing hypersensitivity to corticosteroids distributes the drugs into 3 groups according to molecular structure; patients are classified according to whether they are allergic to agents in 1 or more of the groups. We aimed to describe the clinical characteristics of corticosteroid-allergic patients treated at our clinic and apply the new classification system to them; we also compared these patients' characteristics to those of others treated at our clinic.

Material and methods: Retrospective study of cases of delayed-type corticosteroid hypersensitivity treated in the skin allergy clinic of a tertiary level hospital over an 11-year period.

Results: We reviewed the records of 2857 patients, finding 33 with at least one positive patch test result showing corticosteroid hypersensitivity. Atopic dermatitis and hand involvement were less common in our corticosteroid-allergic patients. All were allergic to a group 1 corticosteroid (most often, budesonide, the culprit in 87.9%). Testing with a specific corticosteroid series revealed that 14 (42.4%) were also allergic to corticosteroids in group 2 and/or group 3. None were allergic exclusively to group 2 or group 3 agents. Twenty-one patients were exposed to a corticosteroid cream from a group their patch test results indicated allergy to; 13 of them (61.9%) did not develop a hypersensitivity reaction.

Conclusions: The Spanish standard series only contains group 1 corticosteroids. In the interest of improving allergy management, we recommend testing with a specific corticosteroid series and a patient's own creams whenever patch testing with a standard series reveals a hypersensitivity reaction to corticosteroids.

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PALABRAS CLAVE

Dermatitis de contacto alérgica;
Pruebas epicutáneas;
Batería estándar;
Corticoides

Estudio de sensibilización a corticoides en una consulta de alergia cutánea**Resumen**

Introducción: Los corticoides pueden producir reacciones de hipersensibilidad, sobre todo retardadas. Se ha propuesto una nueva clasificación para el estudio de la alergia a corticoides que los divide en 3 grupos según su estructura molecular y establece 2 perfiles de pacientes según estén sensibilizados a uno o varios grupos. Los objetivos de este estudio son describir las características clínicas de nuestros pacientes alérgicos a corticoides, compararlas con las del resto de la población estudiada y analizar su distribución según la nueva clasificación.

Material y métodos: Estudio retrospectivo de 11 años que incluye los casos de pacientes con reacciones de hipersensibilidad retardada a corticoides en la Unidad de Alergia Cutánea del Servicio de Dermatología de un hospital terciario.

Resultados: Estudiamos a 2.857 pacientes, de los cuales 33 presentaron uno o más parches positivos a los corticoides. Estos pacientes presentaron menos dermatitis atópica y menor afectación de las manos. Todos fueron alérgicos a algún corticoide del grupo 1 y la budesonida fue el más frecuente (87,9%). Con la batería específica de corticoides observamos que 14 (42,4%) eran, además, alérgicos a corticoides del grupo 2 o 3. Ninguno fue alérgico solo a corticoides del grupo 2 o 3. El 61,9% (13/21) de los pacientes que fueron testados con cremas con un corticoide del grupo al cual era alérgicos no presentó reacción a aquellas.

Conclusiones: La batería estándar española tiene solo marcadores para la alergia a corticoides del grupo 1. Recomendamos aplicar una batería específica de corticoides y los fármacos propios si los marcadores son positivos para poder clasificarlos mejor y adecuar su manejo terapéutico.

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Introduction

Corticosteroids are widely used in dermatology. They were introduced as topical agents in 1952,¹ and, although they have proven very efficacious, they are not free from adverse effects. Despite their anti-inflammatory and immunomodulatory properties, corticosteroids can also behave—albeit paradoxically—as allergens and cause mainly delayed-type hypersensitivity reactions.²⁻⁶

Corticosteroid-induced allergic contact dermatitis is increasingly common, and prevalence ranges from 0.2% to 5%. Attempts have been made to classify corticosteroids into groups in order to better define sensitization to them. In 1989, corticosteroids were classified into 4 groups, namely, A, B, C, and D,⁷ which in 2000 was subdivided into D1 and D2⁸ depending on chemical structure and cross-reactivity patterns. The drugs with the greatest sensitizing capacity were in groups A and D2. Subsequently, it was observed that cross-reactions were occasionally not as predicted or expected according to the classification, which was then modified. In 2009, Baeck et al.⁹ studied molecular models of corticosteroids and patch test results from 315 corticosteroid-sensitized patients. In 2011, they proposed a new, simpler classification that divided corticosteroids into 3 groups (Table 1).^{10,11} Group 1 comprises those drugs that most commonly produce allergic reactions, and group 3 those that have the lowest sensitizing capacity and produce the fewest cross-reactions.¹² The authors also classified patients into 2 profiles depending on whether they were sensitized to 1 or more groups; therefore, patients with profile 1 only react to a single group and those with profile 2 react to several groups.

The main objective of the present study was to analyze the clinical and demographic characteristics of corticosteroid-sensitized patients followed at the skin

allergy unit of our dermatology service during the last 11 years. The secondary objectives were to compare these characteristics with those of the other study patients and to group patients according to the new classification.

Material and Methods**Study Design**

The study was performed in the Skin Allergy Unit of the Dermatology Department of Hospital General Universitario de Alicante, Alicante, Spain and took the form of a retrospective review of all patients diagnosed with delayed-type sensitivity reactions to corticosteroids between January 2004 and December 2014.

Study Population

We included all study patients who underwent patch testing and were sensitized to a corticosteroid. The clinical data recorded for each patient were age and sex, profession, history of atopy, location of skin lesions, and subsequent use of corticosteroids. The results recorded from the patch tests were positivity to corticosteroids, positivity to the patient's own commercially available creams, and cosensitization to other allergens. We used the MOAHLFA index to compare clinical data from these patients with those of the other patients on whom we performed skin tests during the study period. The data were retrieved from the electronic database at the clinic.

Method and Patch Test Readings

All patients underwent patch testing with the standard series of the Spanish Contact Dermatitis and Skin Allergy

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