

Case report

Positivity of patch tests in cutaneous reaction to aminocaproic acid: two case reports

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We observed two cases of maculopapular eruption occurring 12-72 h after the administration of aminocaproic acid (ACA). Patch tests performed with ACA were positive. Clinical and allergologic patterns suggest the type IV mechanism of hypersensitivity. We present what we believe are the first two cases described of hypersensitivity to this drug.

Key words: aminocaproic acid; hypersensitivity reaction; patch test.

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Aminocaproic acid (ACA) is an inhibitor of fibrinolysis. Results of most *in vitro* studies indicate that the primary action of ACA is the inhibition of the activation of plasminogen or profibrinolysin, carried out by several enzymes such as streptokinase and urokinase. In this way, ACA prevents the formation of plasmin or fibrinolysin and, finally, the lysis of the clot (4).

ACA is useful in the treatment of excessive bleeding resulting from systemic hyperfibrinolysis and urinary fibrinolysis, but only after hyperfibrinolysis has been confirmed by laboratory studies. Thus, ACA is used in surgical complications following heart surgery; carcinoma of the lung, cervix, or stomach; abruptio placentae; hematologic disorders such as aplastic anemia; hepatic allotransplantation; and hematuria, surgical or nonsurgical: prostatectomy and nephrectomy or neoplastic disease of the genitourinary tract (1). It has also been used for the treatment of C1 INH deficiency, although it is no longer the treatment of first choice (3).

Adverse or secondary effects of ACA include nausea, cramps, dizziness, tinnitus, malaise, hypotension, bradycardia, myalgias, skeletal muscular weakness, elevated serum concentrations of muscular enzymes, nasal stuffiness, and other disorders (1).

We describe two cases of cutaneous adverse re-

actions to ACA that may have been caused by delayed hypersensitivity to this drug.

Case reports

Patient 1

A 68-year-old man was admitted to the department of urology for a study of hematuria. That same day was started therapy consisting of norfloxacin (Noroxin®) and ACA (Caproamin®). Three days later, he developed a maculopapular, erythematous, and severely pruriginous eruption, spread throughout the thorax, abdomen, back, face, and ears. Two days later, the patient additionally developed edema in the hands, face, and knees. The treatment was discontinued and another one with hydrocortisone and skin hydrating milk was indicated. The episode receded in about 10 days with intense desquamation.

The patient described problems with no other drugs. He was tolerant to aspirin and did not remember using antibiotics except the previously mentioned one.

His personal history included varix surgery in his lower limbs 15 years before, and peritonitis secondary to appendicular perforation 7 years before.

Allergologic studies

Patch tests with the standard series of the Spanish Contact Dermatitis Research Group (SCDRG) were positive for the mix of perfumes. This series includes the patch tests of the International Contact Dermatitis Research Group (ICDRG) plus mercury and thiomersal (2, 5).

The patch test with norfloxacin 5%, in vaseline base was negative.

Patch testing with 0.2 ml of a solution containing 4 g/ml of ACA produced a strong positive result 48 h later, with vesiculation spreading beyond the patch area.

The skin test (prick) and the challenge test up to 400 mg, both with norfloxacin, were negative.

Control patch tests performed with the same concentration of ACA on seven patients were negative.

Patient 2

A 16-year-old woman was admitted to the department of otorhinolaryngology for an operation in her right ear. Three days before admission, she began therapy with Caprofides hemostático®, a hemostatic compound of ACA, esculin, menadione, hesperidine, methylalcalone, serotonin, sodium cyclamate, and a sweetened and aromatized excipient. Four to five hours after the second oral dose, the patient developed rash in the inguen and arm pits, foot numbness, and blurred vision. During the exploration, she showed a maculopapular eruption spread over the truncus. The treatment was discontinued and corticoid therapy was begun.

The personal history included recidivant otitis.

Allergologic studies

The patch test performed with the standard SCDRG series was positive for paraphenylenodiamine.

Patch testing with 0.2 ml of a solution containing 4 g/ml of ACA was positive 48 h later.

Discussion

We present what we believe are the two first cases described in the literature of hypersensitivity to ACA.

We would like to emphasize the relevance of patch testing in the study of adverse effects of drugs, particularly when those effects suggest a delayed or cellular mechanism.

References

1. AHFS DRUG INFORMATION 94. Hemostatics 20: 12.16. Bethesda, MD, 20814: 890-1.
2. DERMATITIS DE CONTACTO. Boletín Informativo del GEIDC 1991; 17: 3.
3. KAPLAN AP. Urticaria and angioedema. In: MIDDLETON E Jr, REED CE, ELLIS EF, ADKINSON NF Jr, YUNGINGER JW, eds. Allergy. Principles and practice. St Louis, MO: CV Mosby, 1988: 1377-1401.
4. MAJERUS PW, BROZE GJ, MILETICH JP, TOLLEFSEN DM. Anticoagulant thrombolytic and antiplatelet agents. In: GOODMAN GILMAN A, RALL TW, et al., eds. The pharmacological basis of therapeutics. New York: Pergamon Press, 1990: 1271-89.
5. ANDERSEN KE, BURROWS D, WHITE I. Allergens from the standard series. In: RYCROFT RJG, MENNE T, FROSCH PJ, BENEZRA OR, et al. Textbook of contact dermatitis. Berlin: Springer-Verlag, 1991: 415-58.

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