

Dermatitis to captopril

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SUMMARY

Background: reports on delayed cutaneous reactions to captopril have been seldom reported.

Captopril is an angiotensin-converting enzyme (ACE) inhibitor and their cutaneous side-effects are documented, but little has been published concerning the usefulness of patch test when they occur. We presented the case of a patient who developed a cutaneous reaction induced by captopril with positive patch test.

Methods and results: patch testing was performed with captopril, other ACE (enalapril, lisinopril ramipril), and European standard series. Following, we performed a double-blind oral challenge test with drugs who results was negative. Positive reaction were obtained to captopril at 4 days and the others test being negative. The same test were negative in five control patients. The patient tolerated enalapril, and lisinopril without problems.

Conclusion: the allergological studies confirmed sensitisation to captopril and tolerance to lisinopril, and enalapril. When patch test are performed with several drugs of the same family, results seem to indicate an absence of cross-sensitivity, but in several patients, oral provocation test were needed because patch test gave no conclusive information.

Key words: Angiotensin-converting enzyme inhibitor. Captopril. Cross-sensitivity. Enalapril. Lisinopril. Patch testing. Ramipril.

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INTRODUCTION

The clinical usefulness of patch testing in adverse cutaneous reaction has been reported, especially for

systemic contact dermatitis. However, the clinical characteristic of cutaneous reactions are polymorphous and the pathophysiological mechanisms cannot be defined.

Captopril is an angiotensin-converting enzyme (ACE) inhibitor. Its delayed cutaneous reactions have been reported, but there have been few reports of cutaneous reactions to captopril with positive patch test.

CASE REPORT

We presented the case of a patient who developed a cutaneous reaction induced by captopril. A 74-year-old man, began oral treatment for hypertension with the angiotensin-converting enzyme (ACE) inhibitor captopril 25 mgr, one time daily. He has been diagnosed of glomerulonephritis and chronic renal insufficiency 3 years ago. His medications included furosemide and prednisone. Two months after, he developed a pruritic maculopapular rash involving his trunk, back and lower extremities, and he was treated initially with an hydrocortisone cream and diphenhydramine. These symptoms improved completely within 20 days of stopping the hypertension treatment.

MATERIAL AND METHODS

Pach testing was performed with captopril, furosemide, prednisone, other ACE inhibitors (enalapril, lisinopril, ramipril) and European standard series (True-Test-Alk-Abello, Madrid Spain). Commercial captopril (Capoten™), as well as commercial enalapril (Renitecn™), lisinopril (Donekan™) and ramipril (Caraseln™) were tested at 10 % pet.

A double-blind oral challenge was performed with enalapril and lisinopril in order to find an alternative treatment.

RESULTS

Positive reaction were obtained to commercial captopril at 4 days. The same test were negative in 5 control patients without adverse cutaneous reaction to captopril. The only positive reaction was to captopril, wich was confirmed by a repeated positive reaction.

We performed a double-blind oral challenge test with Renitecn™ and Donekan™. The patient tolerated enalapril and lisinopril without problems.

DISCUSSION

Up to 15 % of patients treated with captopril develop a rash during the first few weeks of treatment: maculopapular, urticarial, pityriasis rosea-like, psoriasis-form, and lupus erythematosus-like have all been reported with captopril (1). There have been also few reports of systemic reactions to ACE inhibitors (2).

The clinical usefulness of patch testing in adverse cutaneous drug reactions has been recognized. The only study performed on a sample of 15 patients with captopril reactions gave positive results in 1/3 of the cases (3). When patch tests are performed with several ACE inhibitors, results seem to indicate an absence of cross-sensitivity permitting the replacement of the causative drug by another product of the same family. In several patients, oral provocation test were needed because patch tests gave no conclusive information.

Captopril is the only such drug containing a sulfhydryl group, wich is considered to be cause of positive patch test reactions (4). The negative patch test, as well as oral tolerance, of other ACE inhibitors lead us to believe that there is no cross-reactivity among these compounds (5).

The allergological studies confirmed sensitisation to captopril and tolerance to lisinopril and enalapril. This case confirms that in the contact dermatitis due to ACE inhibitors drugs sensitisation it is not always necessary to prohibit the use of all the drugs in the pharmacological group of the one causing the reaction. An allergological study is advisable in order to stablish which drugs should be avoided.

RESUMEN

Antecedentes: pocos casos de reacciones cutáneas tardías por captopril han sido descritas. El cap-

topril es un fármaco inhibidor del enzima conversor de la angiotensina (IECA), y sus efectos cutáneos secundarios han sido documentados, pero poco ha sido publicado respecto el uso de las pruebas epicutáneas cuando eso ocurre. Presentamos el caso de un paciente que desarrolla una reacción cutánea inducida por captopril, con test del parche positivo.

Métodos y resultados: las pruebas epicutáneas fueron realizadas con captopril, otros IECAs, y batería estándar europea. Posteriormente, realizamos estudio de provocación oral con los fármacos con resultado negativo. Las pruebas fueron positivas para captopril a los 4 días, y negativas para los otros fármacos. El mismo test fue negativo en cinco controles. El paciente toleró enalapril y lisinopril sin problemas.

Conclusión: el estudio alergológico confirma la sensibilización a captopril y la tolerancia a lisinopril y enalapril. Cuando las pruebas epicutáneas se realizan con varios fármacos de la misma familia, los resultados indican una ausencia de reactividad cruzada, pero en muchos pacientes el test de provocación oral es necesario porque las pruebas epicutáneas no proporcionan una información concluyente.

Palabras clave: Enzima inhibidora de la angiotensina. Captopril. Reactividad cruzada. Enalapril. Lisinopril. Test del parche. Ramipril.

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