

Contact allergy to dorzolamide eyedrops

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Dorzolamide is a carbonic anhydrase inhibitor used for topical glaucoma therapy. It belongs to the sulfonamides (1). Ocular side-effects, such as stinging, burning and allergy, can develop (1). To my knowledge, there are no previous reports of patch testing with dorzolamide.

Case Reports

A 56-year-old woman (patient no. 1) had had glaucoma since 1996. Because of initially inadequate ocular hypotensive efficacy, topical timolol was combined with Trusopt® eyedrops, which contain 20 mg/ml dorzolamide hydrochloride, hydroxyethyl cellulose, mannitol, sodium citrate, sodium hydroxide and benzalkonium chloride. She developed lid eczema in 1997, when she had used Trusopt® eyedrops for about 1 year, which did not respond to topical chloramphenicol, but did to topical prednisolone. Symptoms were further relieved when Trusopt® eyedrops were discontinued, and topical timolol substituted with a preservative-free preparation. The patient had had a burning sensation particularly after the application of Trusopt® eyedrops.

Patch tests were performed by the Finn Chamber method, the duration of occlusion being 2 days, and the results being read according to the ICDRG (2). Initially, there was a ++ reaction at D4 to Trusopt® eyedrops (as is). Dorzolamide hydrochloride was then kindly provided by Merck Sharp and Dome, and the patient tested with dilution series in aq. and in pet. There were positive reactions down to dorzolamide 0.5% aq. and 1% pet. (Table 1). 20 control patients were tested with these 2 concentrations with negative results. The patient did not react to benzalkonium chloride, chloramphenicol or timolol eyedrops. In the standard series, she also had positive reactions to potassium dichromate, cobalt chloride and p-tertiary-butylphenol-formaldehyde resin.

In 1997, we had another patient (no. 2) with lid eczema in connection with Trusopt® eyedrops. She had a + reaction at D4 to Trusopt® eyedrops (as is). Her symptoms disappeared after Trusopt® therapy had been discontinued.

Discussion

Dorzolamide hydrochloride is a relatively new treatment for glaucoma (1), and belongs to the sulfonamides (1), which are known sensitizers (3). In a series of 313 patients on topical dorzolamide therapy, 4% developed conjunctivitis and 3% eyelid inflammation, though the patients were not patch tested (4).

Table 1. Results of serial dilution tests in patient no. 1

		in water		in pet.	
		D2	D5	D2	D5
dorzolamide hydrochloride	10%	+	++	++	++
	5%	+	++	+	++
	1%	?+	++	?+	+
	0.5%	?+	++	—	?+
	0.1%	—	?+	—	—
	0.05%	—	?+	—	—
	0.01%	—	?+	—	—
Trusopt® eyedrops 2%	as is	++	++		
	50%	+	++		
	10%	—	?+		
	5%	—	—		
	1%	—	—		
	0.5%	—	—		
	0.1%	—	—		

References

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