Short Communication

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Adverse Reaction to Locally Applied Preservatives in Nose Drops

G.

Gunnar

Hillerdal

Department of Pulmonary Medicine and Allergy, University Hospital, Uppsala, Sweden

Key Words

Acetylsalicylic acid

Sodium benzoate

Hypersensitivity

Nose drops

Rhinitis

Abstract

A 33-year-old woman with documented hypersensitivity to acetylsalicylic acid (ASA) and preservatives, causing bronchial asthma and rhinitis when ingested, was investigated because of 'allergy to nose drops'. It was found that she had a serious local reaction caused by the preservative used in the nose drops prescribed. This reaction might occur more commonly than realized, since sensitivity towards ASA is fairly common in the general population.

Dr. Gunnar Hillerdal, MD, Department of Pulmonary Medicine and Allergy, University Hospital, S-751 85 Uppsala (Sweden)

Adverse reactions, mainly nasal congestion and bronchial asthma, to ingested acetylsalicylic acid (ASA) and sometimes also to food additives such as dyes and preservatives are well known. Preservatives are also used in drugs for local application, but this potential risk has been little commented upon. A case of such local reactions is presented here.

Case Report

A 33-year-old woman was first seen 8 years ago when investigated for bronchial asthma and rhinitis. She was a classical example (except for her age, then 25) of ASA idiosyncrasy and also reacted strongly when challenged orally with tartrazine (a dye) and sodium benzoate (a preservative used in various foods). With a strict diet she has since been able to live fairly comfortably.

In February 1982, she developed an acute sinusitis after a common cold. Her general practitioner prescribed penicillin and nasal drops containing benz-alkonium chloride. After having used the nasal drops for 2 days she stopped because she felt much worse. After another 2 days, when she had improved a little, she visited an otorhinolaryngologist who persuaded her to start with the nasal drops again. Having used them another 2 days, she was now completely congested with severe pain, so she stopped all medication and cured herself by taking 2 weeks off as sick leave after which she felt normal again. She now visited the allergy department of the lung clinic complaining of 'allergy to nasal drops'.

The patient was challenged by dropping into her nose one drop of physiological saline, nasal drops of the kind she had used, and a solution of benzalkonium chloride in the same concentration as in the nasal drops on various days when her nose was clear. The saline gave no reaction. The benzalkonium chloride gave nasal congestion and itching eyes and throat lasting 48 h. The nasal drops caused a partial congestion,

discomfort and itching for 24 h and was therefore repeated with two drops 2 days later. This time there were 3 days of completely congested nose, sinusitis pain, and itching and burning of eyes, nose and throat.

Discussion

The patient's reactions seem to indicate hypersensitivity towards the locally applied preservative. This effect was probably masked to a certain extent by the active substance in the nasal drops. A search in Med-line and Index Medicus yielded no similar reports.

One case of serious skin reactions with blisters etc. has been reported in a patient treated with plaster of Paris containing benz-alkonium chloride [1] and in another report Löffler's syndrome developed in a patient treated with nasal drops containing the same preservative [2]. In view of the well-documented idiosyncrasy towards ASA, preservatives and tartrazine in the presently described patient, it seems probable that the serious local reaction was due to the same mechanism. Whether the two reports mentioned

above describe genuine allergy towards the drug or idiosyncrasy is impossible to judge. Patients with idiosyncrasy towards ASA should avoid any drugs with preservatives, whether applied locally or taken orally. Since a number of drugs contain potentially dangerous preservatives, this is not always possible but the possibility of adverse reactions should always be kept in mind.

References

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