

ANAPHYLAXIS DUE TO TOPICAL PENICILLIN

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REPORTS in the literature dealing with anaphylaxis resulting from the topical administration of penicillin have indeed been exceedingly few.^{1, 2, 4} The sites of application were limited to the maxillary antra and the bronchial tree. To our knowledge, penicillin ophthalmic ointment has not been incriminated as the direct cause of an anaphylactic reaction, and it is for this reason the following case is reported.

CASE REPORT

In 1943, during a course of heavy metal treatment for probable congenital syphilis, this 44-year-old Negro practical nurse developed a generalized pruritic rash that disappeared within two weeks after cessation of treatment.

In July, 1946, for a persistently positive serologic test for syphilis, she received a total of 4,800,000 units of penicillin over a 15-day period unattended by side effects. In February, 1953, she was given an injection of penicillin by her local physician for bronchitis, and for the remainder of the night noted tightness in the chest and wheezing. Two days later a rash appeared over her face and, although a provisional diagnosis of measles was made, no other stigmata of the disease developed.

On May 26, 1953, while on duty, she noted slight burning and redness of the right eye of several hours' duration. She applied some penicillin ophthalmic ointment containing 100,000 units of crystalline potassium penicillin G per gram to the involved eye and within seconds developed an offensive taste in her mouth. This was quickly followed by shortness of breath, a flushed appearance, cramping lower abdominal pain, and the passage of flatus and a large watery stool. There was no dysphagia, nausea, vomiting, urticaria or pruritus. There was no loss of consciousness. Asthmatic wheezes were audible throughout both lung fields. The blood pressure was 70/50 mm. Hg. Within ten minutes of the onset of the reaction, she received 0.5 ml. of a 1:1,000 aqueous solution of epinephrine subcutaneously, 64 mg. of Luminal, 0.4 mg. of atropine sulfate, and 100 mg. of Pyribenzamine.

Although the patient responded satisfactorily to this treatment within one hour, she was admitted to the hospital for further observation. General physical examination on admission to the ward revealed the following pertinent findings. There was slight injection of the right conjunctiva; there were several carious teeth. The lungs were clear to percussion and auscultation. The heart was not enlarged; the apex was in the fourth left intercostal space within the midclavicular line and there was a soft apical systolic murmur. The blood pressure was 120/70 mm. Hg and the radial pulse 98. The remainder of the physical examination was within normal limits.

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Laboratory examinations revealed the hematocrit to be 44 and the icterus index 5. The white blood count was 16,000 with 1 per cent juveniles; 85 per cent, segmented neutrophils; 10 per cent, lymphocytes, and 4 per cent, monocytes. A sickle-cell test and urinalysis were negative.

The patient remained asymptomatic except for occasional mild respiratory wheezes and was discharged the following morning.

The family history and past history were not contributory. There was no past history of allergic reactions except as has been noted.

On Oct. 19, 1953, patch tests were done with the penicillin ophthalmic ointment and with the chemically inert ointment base alone. To the former she responded with a pruritic, erythematous wheal 1.5 cm. in diameter with several small pseudopodia, in thirty-five minutes. To the nonpenicillin-containing base there was no reaction, immediate or delayed.

COMMENT

This patient was of considerable interest in that a skin rash developed following her second exposure to parenteral penicillin. Had this latter reaction been evaluated in its true light and its importance impressed upon the patient, no doubt she would have been spared this last severe experience. It has been proposed that a patient having survived an anaphylactic reaction be provided with identification to the effect that penicillin not be administered under any circumstances.³

The ease with which such alarming reactions are precipitated by seemingly insignificant doses of penicillin is most distressing, and it is not beyond the sphere of reality that injudicious skin testing itself may provoke a severe or perhaps even fatal reaction.

As yet, there have been no fatalities attributed to topical penicillin. This has probably been due to relatively slower absorption from smaller doses at the site of application when compared to parenteral penicillin. The promptness in administering specific treatment to all patients, so far reported, has also aided the fortunate outcome of these cases. Undoubtedly, the case here presented would have developed more profound symptoms had treatment been withheld.

SUMMARY

A case of anaphylaxis to penicillin ophthalmic ointment in a 40-year-old female practical nurse is presented.

REFERENCES

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