

ACCIDENTAL OCULOFACIAL VACCINIA*

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Accidental vaccinia as a complication of smallpox vaccination usually requires no treatment¹. But when orbital cellulitis with or without conjunctivitis due to accidental vaccinia occurs in a person lacking immunity, then treatment with antiviral agents is necessary².

Case Report

S.G., a 2-year-old girl, was admitted to Hacettepe Children's Hospital in June 1980 with the diagnosis of orbital cellulitis. The past history revealed that on the eighth day following smallpox vaccination (two days prior to admission) she was bitten by mosquitos. Redness and swelling developed on her left upper and lower eyelids, and purulent exudate was seen on the cornea on the day of admission. Papules and pustules were observed on the left wrist, on both cheeks, and on the left side of the lip (Figures 1,2). Her temperature was 38.5°C.

The white blood cell count was 14,000/mm³ with 72% polymorphonuclear leukocytes, 28% lymphocytes. Inclusion bodies were seen in the smear prepared from the lesion, but no pathogenic organism was observed in the cultures or gram-stained smear of the exudate. Vaccinia grew in viral culture.

The patient was treated with cytosine arabinoside (Cytosar^R) intravenously 3 mg/kg/day for three days and 5-iodo-2'-deoxyuridine ophthalmic ointment (Synmiol^R) topically four times a day.

Her temperature was normal by the second day after admission. The lesions showed progressive involution, and she was discharged on the seventh day. After a week she was seen again, at which time the lesions had healed completely and her vision was intact (Figure 3).

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Figure 1



Figure 2



Figure 3

Discussion

Vaccinia virus can be implanted from the site of vaccination onto the skin or mucous membranes of the vaccinated individual¹. In this case, the means of transmission is uncertain. It may have been by the mosquitos or by the hands of the patient while scratching an insect bite.

The diagnosis of oculofacial vaccinia can be made on the basis of history and clinical characteristics and confirmed by a viral culture from the lesion and by a direct smear^{3,4}. Differential diagnosis must consider the possibility of bacterial cellulitis of the orbita.

If the inoculation is close to the eye, and if there is a risk of keratitis, the drugs of choice include interferone¹, specific immune globulin⁵, vidarabine⁶, cytosine arabinoside⁷, and 5-iodo-2'-deoxyuridine⁸. We administered cytosine arabinoside systemically and 5-iodo-2'-deoxyuridine topically. Although smallpox vaccination should no longer be practiced, in case of the occurrence of a lesion as described above, physicians should be aware of the complications and course of treatment. Differential diagnosis can be made on the basis of the appearance of the lesion.

Summary

A case of accidental oculofacial vaccinia and the course of treatment are presented. Although smallpox vaccination is no longer recommended, attention should be drawn to the complications and to the appearance of the lesions, which may aid the physician in making a diagnosis.

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