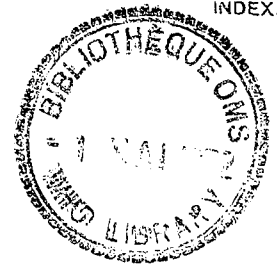




SMALLPOX VACCINATION IN ATOPIC CHILDREN

by

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Smallpox vaccination in eczematous children carries with it a significant risk. At least 100 cases of eczema vaccinatum, including one to two deaths, occur annually in the United States of America. Data are lacking, however, concerning the precise incidence of systemic reactions in eczematous children immunized with the standard vaccine. An epidemiological study of atopic children in the State of Maryland in 1965 offered an opportunity to study in retrospect the incidence of systemic reactions of atopic children immunized with the standard calf lymph vaccine. Using birth certificates, a stratified random sample of one-year-old children born in Maryland was selected. The mothers of 4955 children, 85 per cent. of the projected sample, were interviewed. There were 556 children who were subsequently determined to have atopic dermatitis, an incidence of 11.2 per 100 children studied. Atopic dermatitis was defined as any child who was reported by his parents to have had a skin condition called eczema, or a skin condition first noticed on the face or present behind his knees or in front of his elbows lasting for two months or more. Two of these children (1.02 per cent.) developed a rash following vaccination. Both of these rashes occurred 10 days after vaccination, were mild in nature and lasted no more than four or five days. One rash was papular over the arms and face and the other was maculo-papular with a slight vesicular component. Neither child was hospitalized or received any specific therapy. These two illnesses closely resembled the mild erythematous, sometimes vesicular rashes, that occur in normal individuals following primary vaccination and not the generalized dissemination of vaccinia virus which is characteristic of eczema vaccinatum. In the non-atopic controls in this study, the incidence of this type of rash in those vaccinated was 0.2 per cent. to 0.4 per cent. In another study involving primary vaccination of one- to four-year-old children, the incidence of these rashes was found to be one per cent.

In summary, eczema vaccinatum defined as the generalized spread of vaccinia virus in an eczematous child was not observed in approximately 200 atopic children who received primary vaccination within the first year of life.

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