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## OPTIC ATROPHY AFTER SMALL-POX\*

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VACCINIA virus is now regarded as "pantropic"; Murti and Shrivastav (1957), in their studies on the behaviour of variola virus and one strain of vaccinia virus, observed that the infection became generalized after inoculation on the skin of the rabbit with vaccinia virus, and that lesions of varying severity were seen in the lungs, heart, liver, and kidney, as well as the skin. It is only to be expected, therefore, that vaccinia virus should attack the nervous system, such affections being usually described as "complications". Vaccinia can produce serious attacks of encephalitis and encephalomyelitis leading to paraplegia and hemiplegia. Brain (1955) quotes Mackintosh and Scarff (1927-28) as showing that these nervous manifestations simulate those of post-vaccinial encephalomyelitis, including transient papilloedema of the optic nerve. Much has been written about small-pox lesions of the eyelid, conjunctiva, and cornea, but uveal, retinal, and optic nerve complications are considered to be rare (Thygeson, 1951). Here we report a case of optic nerve atrophy in a child, which was the sole ocular or nervous lesion to follow an attack of small-pox.

### Case Report

A male Hindu child, aged 3 years, was brought to the hospital with the complaint of blindness just after an attack of small-pox about 3 months before. The mother stated that the child had high fever for 3 days. He had vesicular eruptions all over the body and became very restless. He was semi-conscious with attacks of vomiting for about 4 to 5 days after the appearance of the eruptions. After the separation of the scabs, it was noticed that the child failed to respond to visual stimuli. Before this illness, he had been unable to see very well and was in normal health, but had not been vaccinated.

*Examination.*—The child had made a normal recovery, but showed pitted scars all over the body. There was no response to the visual stimuli, but no involvement of any other cranial nerve and no evidence of paresis or paralysis. The deep tendon reflexes and the superficial reflexes were normal. There was no sensory loss or clinical evidence of hydrocephalus.

*Ophthalmological Examination.*—There was no lesion of the cornea, anterior chamber, or lens. The pupillary reflexes were normal. The fundus was examined under general anaesthesia, and the optic nerve head in both the eyes was found to be waxy pale with

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## OPTIC ATROPHY AFTER SMALL-POX

379

hazy margins, and the physiological pit was obliterated. There was marked generalized oedema of the retina and the blood vessels were generally attenuated and tortuous. There were no exudates or haemorrhages.

The diagnosis of secondary optic atrophy was made.

A skiagram of the skull showed no abnormality and the cerebrospinal fluid was normal. Other routine examinations of the blood, urine, and stools were also normal.

### Comment

The involvement of the optic nerve in this case appears to have taken place during the eruptive stage of small-pox, which produced papillitis followed by optic atrophy. In the absence of any residual paralysis, involvement of the other cranial nerves, or abnormality in the cerebrospinal fluid or skiagram of the skull, the diagnosis of encephalitis could not be established.

The optic atrophy seemed to be entirely due to the active inflammation of the optic nerve caused by the vaccinia virus.

### Summary

A case of optic nerve atrophy after papillitis due to small-pox in a child has been described and its rarity emphasized.

### REFERENCES

- BRAIN, W. RUSSELL (1955). "Diseases of The Nervous System", 5th ed., pp. 502, 504. Oxford Medical Publications.
- MCINTOSH, J., and SCARFF, R. W. (1927-28). *Proc. roy. Soc. Med.*, **21**, 705.
- MURTI, B. R., and SHRIVASTAV, J. B. (1957). *Indian J. med. Sci.*, **11**, 574, 508.
- THYGESON, P. (1951). In "Systemic Ophthalmology", ed. A. Sorsby, p. 245. Butterworth, London.



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