Acute Infantile Hemiplegia Associated with Ipsilateral Retinal Vascular Occlusion

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SUMMARY

An 18-month-old patient with acute infantile hemiplegia, aphasia and ipsilateral retinal vascular occlusion, is described. The ophthalmic findings suggest that the lesion was due to emboli originating from both internal carotid arteries, probably as a result of upper respiratory tract infection and otitis media.

This report emphasises the importance of examination of the retinal vasculature in assessing the extent and pathogenesis of the intracranial lesion in acute infantile hemiplegia.

S. Afr. Med. J., **48**, 1072 (1974).

Retinal lesions in acute infantile hemiplegia are uncommon, and usually occur on the contralateral side. This report describes a case of acute infantile hemiplegia in which fundal lesions occurred on the same side as the hemiplegia.

CASE REPORT

An 18-month-old, well-nourished, Black male child had otitis media, upper respiratory tract infection and pneumonia. A convulsion occurred, followed by a right hemiplegia and aphasia—the typical picture of acute infantile hemiplegia.[1] The right fundus showed a superior retinal vascular occlusion involving both arteries and veins. Flame-shaped haemorrhage and venous sludging were present and the left fundus showed mild papilloedema.

After 6 weeks, the lumina of the right retinal vessels were replaced by a white material which made it extremely difficult to distinguish arteries from veins. Where veins could be distinguished they showed kinking, loops and beading. The intra-ocular pressure and ophthalmodynamometry were normal and equal in both eyes.

During the next 6 months, the right eye became exotropic, with a sluggish pupillary response to light. There was some recovery of speech and the right leg movements returned, but the right arm remained spastic.

Two years later, the neurological findings remained the same. The patient's performance of perceptual motor tasks and language comprehension remained well below those of his twin brother.

DISCUSSION

Aetiologically infantile hemiplegia can be divided into a large idiopathic group and a smaller group in which some definite predisposing cause can be found.

Although arteriography was not done in this case, occlusions in the carotid arterial system, as demonstrated by angiography, are well documented.[1,2] Such lesions have also been described in association with minimal trauma to the neck, infections of the paratonsillar area and upper respiratory tract, and otitis media pneumonia. Most of these occlusions are probably thrombotic rather than embolic. Occasionally they may be explained on the basis of a vasculitis.[2]

Homonymous hemianopia and cortical blindness are due to involvement of the brain, while squints, and varying degrees of non-cortical amblyopia can be better explained by the direct involvement of the retinal vasculature.

The striking fundal picture of a right retinal vasculitis with a right hemiplegia suggests emboli from carotid arteries, or perhaps an ascending vasculitis.

The retinal arterial occlusion is attributed to an infected embolus, while the associated venous lesion can be explained on the basis of an infective periphlebitis or retrograde venous thrombosis. This case supports the concept of the disease being due to a vascular lesion of the internal carotid system.

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