Parinaud's Vertical Ophthalmoplegia

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Unlike horizontal ophthalmoplegia, the vertical form is uncommon. Specifically downward ophthalmoplegia is rare. In a patient with severe cerebral arteriosclerosis, a vertical Parinaud ophthalmoplegia was observed, which in this case caused serious difficulties in eating. His inability to look down prevented the patient from seeing his plate. The classical dysfunctional symptoms are demonstrated by means of a film: (a) Inability to look up or down as ordered, (b) Enhanced fixation reflex on perception of slow-moving objects, (c) Correct vertical eye movements with reflex response to postural changes, (d) Vertical optokinetic nystagmus has been superseded by upward or downward deviation according with the direction of rotation, (e) Convergence is abolished. (f) The pupils are contracted and unresponsive to photic stimulation, (g) All eye movements in the horizontal plane are normal, including the nystagmus.

Destructive processes in the vicinity of the corpora quadrigemina are usually responsible for these changes demonstrated here. They are usually tumours near the sylvian aqueduct, the third ventricle, the thalamus, the splenium corporis callosi, or the lamina quadrigemina, and fairly frequently are epiphyseal tumours. In view of the extensive arteriosclerosis of the cerebral vessels and the thrombotic processes in the legs, the cause in the case under discussion is to be sought in a small local vascular incident. The difficulties in eating could be overcome by using a mirror and also by the use of 45° prism spectacles.

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45

Discussion

Loewer-Sieger: Do you know how the syndrome in this patient began and how it ended? The specific complaint of being unable to look down is rather rare. In various neurological conditions the vertical ophthalmoplegia is chiefly, especially in the beginning, a limitation of the ability to look up. In the neurological literature, a few years ago, Steele and Richardson described a syndrome of progressive supranuclear paralysis in which the initial symptom was downward ophthalmoplegia. In this respect the syndrome differed from other Parkinson-like syndromes. The syndrome ended with total stiffening of the musculature of the neck and rump, and dementia. The pathological anatomy of the syndrome encompassed diffuse degenerative foci in the cerebrum which were not arteriosclerotic. Perhaps your patient fits in with this syndrome?

Bleeker: The syndrome of Parinaud's vertical ophthalmoplegia is completely dependent upon the localisation of the lesion. Any destructive process

be it a tumor

a haemorrhage or an degenerative process

can produce Parinaud's Syndrome

if localised in the corresponding area of the brain stem. In our case generalised arteriosclerosis was so evident that a vascular incident is the most probable cause.