Embolism of the Central Retinal Artery, Originating from an Endocardial Myxoma

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Occlusion of the central retinal artery may be due to:

arteriosclerosis,
functional vasoconstriction,
an embolus.

In most cases, arteriosclerosis with thrombosis or spasm is the cause of occlusion. Emboli may occur in endocarditis and athero-matous processes of the aorta or the internal carotid artery, in air embolism and fat embolism, and they may originate from venous thrombi in the presence of an open foramen ovale.

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A description was given of the histological examination of the left eye of a man, aged 57, who during the night had suddenly developed a subcoma and who the next morning, on admission to the Neurological Department of the Coolsingel Hospital (Ter Braak), showed spastic paralysis of the right half of the body with right-sided central facial paralysis. The EEG indicated extensive damage to the left hemisphere. The ophthalmologist on duty did not find any abnormalities in the right eye. The left eye showed papillary oedema and a recent inflammatory focus between the papilla and the macula; the picture closely resembled an acute juxtapapillary chorioretinitis. After 3 days the patient died. Post-mortem examination of the skull revealed en-cephalomalacia of the left temporal lobe, the posterior part of the left frontal lobe and the inferior part of the left parietal lobe, 1 1/8 cm. from the spot where it opened into the circulus arteriosus, the left carotid artery was filled with a yellowish-red transparent embolus, which continued as far as the left median cerebral artery. In the left eye, the trunk and large branches of the central retinal artery were filled with a substance resembling mucoid degenerated connective tissue, containing few spindle-shaped cells. The same type of embolus was found in one of the posterior ciliary arteries. All these emboli originated from an endocardiac niyxoma found at autopsy in the left atrium. An identical case was described by Reichling in 1934.

Discussion.

Mulock Houwer reported that about 30 years ago he published a description of a case in which a thrombus had developed in the internal carotid artery. This thrombus had extended as far as Willis' circle. At that site, pieces had been washed from it and these had migrated into the ophthalmic artery, causing the presence of emboli in the central artery, in some posterior ciliary arteries and in some muscular arteries. They were demonstrated morbid-anatomically.

Manschot thanked for this important addition. So it was not Reichling but Mulock Houwer who has described the first histologically confirmed case of a real embolus in the central retinal artery.