

The role of hypertension in ocular retinopathy and choroidopathy

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Description

Hypertension is a risk factor for a variety of systemic diseases that can result in substantial morbidity and death. The World Health Organization defines hypertension as having a systolic blood pressure more than 140 mmHg and/or a diastolic blood pressure greater than 90 mmHg, and it affects an estimated 1.13 billion people globally. Hypertension can have a variety of effects on the eyes, including the development of retinopathy, choroidopathy, and optic neuropathy. Hypertension raises the danger of diabetic retinopathy, glaucoma, and age-related macular degeneration developing and progressing. In addition, hypertension is a risk factor for suprachoroidal bleeding after eye surgery.

Hypertension retinopathy and choroidopathy are symptoms of hypertensive changes throughout the body. Mild hypertensive retinopathy symptoms, such as generalized and focal arteriolar constriction, copper wiring, and AV nicking, have been associated to coronary artery disease, stroke, and renal failure. The Ibaraki Prefectural Health Study discovered that moderate hypertensive retinopathy, irrespective of other cardiovascular risk factors, was a risk factor for cardiovascular death. Multivariable hazard ratios for overall cardiovascular mortality in patients with moderate hypertensive retinopathy were 1.23-1.24 for men and 1.12-1.44 for women, while hazard ratios for total stroke mortality were 1.31-1.38 for men and 1.30-1.70 for women.

Moderate hypertensive retinopathy symptoms, such as retinal haemorrhage, cotton wool patches, hard exudates, and microaneurysms, are much more strongly linked to an elevated risk of mortality from cardiovascular causes. According to the Atherosclerosis Risk in Communities study, signs of moderate hypertensive retinopathy were associated with a two- to four-fold increased risk of incident stroke, independent of other risk factors such as long-term blood pressure elevations, cigarette smoking, and elevated lipid levels. According to one study, having a greater grade of hypertensive retinopathy was related with having a higher angiographic severity of coronary artery disease by syntactic score.

Hypertensive chorioretinopathy is more frequent in younger people with acute blood pressure increases and is linked with a poor prognosis if managed. Malignant hypertension, pre-

eclampsia, eclampsia, acute or chronic renal failure, renal artery stenosis, and adrenal cancer have all been linked to it. These are all medical concerns which necessitate immediate attention.

The therapy of hypertensive retinopathy and choroidopathy focuses on lowering systemic blood pressure and, if necessary, correcting the underlying medical condition. If an optometrist or ophthalmologist detects hypertensive chorioretinopathy in a patient with undetected hypertension, the patient's morbidity and death can be reduced. There are no established guidelines for regular screening for hypertensive retinopathy in asymptomatic patients with systemic hypertension. However, if a patient without a history of hypertension appears with symptoms of moderate hypertensive retinopathy, should be sent to a general practitioner within one week. A general practitioner should assess the patient within one or two days if they have mild hypertensive retinopathy. Patients with severe hypertensive retinopathy or hypertension choroidopathy should have their blood pressure checked right away and be referred to the nearest emergency hospital for rapid blood pressure control. There are no specific recommendations for screening women for pregnancy-induced hypertension; nevertheless, pregnant women who present with hypertensive retinopathy should be sent to their obstetrician for pre-eclampsia examination.

While optometrists and ophthalmologists do not often manage hypertension, a strong interaction with general practitioners is required to ensure that patients receive appropriate care. These individuals should be monitored on a regular basis to see if the abnormalities caused by hypertensive chorioretinopathy have resolved.

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