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Purpose

The purpose of this case report is to highlight retinal alterations, mainly changes in the inner retina due to poorly controlled chronic arterial hypertension, which is often neglected.

Introduction

Systemic arterial hypertension can generate retinal and vascular alterations, such as hemorrhages, arterial narrowing, pathological arteriovenous crossing and hard or cottony exudates. (1) This chronic and poorly controlled aggression also generates thinning and atrophy of the inner layer of the retina and consequently worsens the visual acuity of those affected. (2)

Case report

Patient M.G., female, 57 years old, controlled diabetes and difficult-to-control hypertension for 15 years, using Losartan 50 mg, Hydrochlorothiazide 25 mg, Hydralazine 50 mg, Amlodipine 10 mg, Carvedilol 25 mg, all taken twice a day and with progressive visual impairment in both eyes that started 2 years ago. Visual acuity with best correction in the right eye 20/50 and left eye 20/70. Upon examination of biomicroscopy, no alterations were observed. Intraocular pressure 14 mmHg in both eyes. On funduscopy, we identified diffuse arteriolar narrowing and some pathological arteriovenous crossings. In multimodality, optical coherence tomography (OCT) demonstrated a thinning of the inner retinal layer in both eyes.

Discussion

Some studies show the close relationship between arterial narrowing and thinning of the inner layer of the retina. The latter compromises the entire microvasculature of the retina and the reduction in the caliber of the arteries chronically causes hypoperfusion of the inner retina and consequently reduces its thickness. (2) These structural changes in the retina occur mainly in the layers of nerve fibers of the retina and in the layers of ganglion cells and are strongly related to the duration of the disease and high blood pressure levels. (1) The disease is often undervalued, despite the gravity of the consequences. However, currently, the multimodality of retinal exams, such as OCT and retinography, are excellent weapons for the early detection of changes in retinal vascular thickness and caliber.

Bibliography

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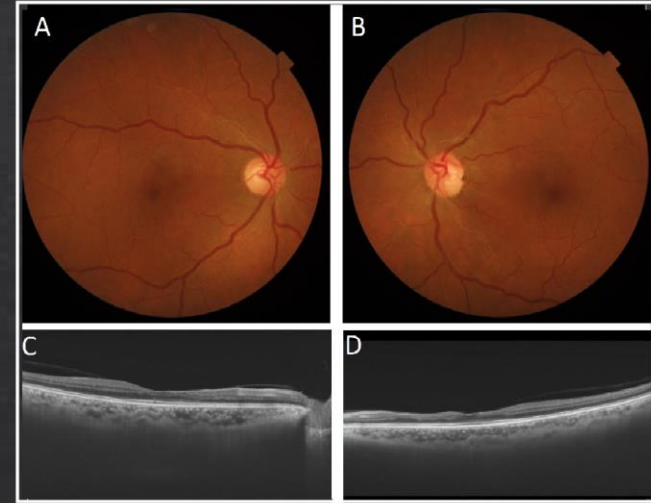


Figure: A and B show simple fundus images with arteriolar narrowing and pathological crossings, in the right and left eyes; C and D, OCT with thinning and atrophy of the inner retina in both eyes.