Differential diagnosis of glaucoma

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Glaucoma is the most commonly acquired visual neuropathy and the main cause of irreversible loss of vision. It is characterized by degeneration of retinal ganglion cells resulting in morphology changes of the optic nerve head (ONH). It may be asymptomatic even at an advanced stage, so the diagnosis is often delayed. According to studies, the pathogenesis of glaucoma is dependent on the interaction of various pathogenetic mechanisms, including mechanical effects such as increased intraocular pressure, neurotrophin refueling, hypoxia, excitotoxicity, oxidative stress, and autoimmunity procedures. However, it has not been elucidated whether the occurrence of antibodies is the cause or the consequence of neuropathy. The thickness of the area between the optical disc and the optic cup is thinner and beyond ISNT boundaries, expanding the boundaries of the optical disc, magnifying the optic cup vertically, an acquired optic pit., Baring of a circumlinear vessels, Vessel bayoneting at the optic rim (indicating bean-pot cupping), Nasalization of vessels, Disc hemorrhage (Drancehemorrhage), abnormally large or atypical pattern of parapapillary atrophy (beta zone atrophy). Optic nerve histological damage occurs as a loss of neuro-axons and ganglion cells by optic nerve head. The area of injury is located in the sclera where there is cellular obstruction (axonal transport) for the production of proteins necessary for growth and survival of neurons. Eventually, knowing the relationship between IOP, IOP fluctuations, mechanical strain or stress-driven remodeling, ONH blood flow, and astrocyte and axonal homeostasis will drive the clinical assessment of safe target IOP, although the technologies to assess these factors have yet to materialize.

Biography

Chandrinos Aristeidis is the undergraduate Director and Ass. Professor at Athens University of West Attica. He had published a lot of research articles and book chapters and edited 4 books in Optics and Optometry field.

Tzamouranis Dorotheos-Dimitrios is a postgraduate Optometrist and a member of Research Group Investigative Techniques in Optometry in Department of Biomedical Sciences at University of West Attica. He conducted his postgraduate research at the Eye clinic of University of West Attica with title "Assessment of Contrast Sensitivity in Age Related Maculopathy Simulation".