

Pathogenesis and clinical implications of optic disk hemorrhage in glaucoma

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The association between optic disk hemorrhage and glaucoma has been studied for many years. Recently, randomized clinical trials have confirmed that disk hemorrhage is a risk factor for development and progression of glaucoma.

Disk hemorrhage is more commonly detected in open-angle glaucoma with normal tension than in open-angle glaucoma with high tension. Development of disk hemorrhage possibly is associated with the biomechanical properties of the lamina cribrosa and surrounding tissues, including the intraocular pressure (IOP) -cerebrospinal pressure gradient, arterial pressure, and venous pressure.

Disk hemorrhage may be a marker of rapid glaucoma progression, in that localized subclinical structural change predisposes to disk hemorrhage, after which subsequent disease progression is accelerated, and recurrent optic disk hemorrhages are related to rapid structural progression of glaucomatous damage. IOP-lowering therapy can be helpful in halting post-hemorrhage glaucoma progression.

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