



Glaucoma and small optic discs: a diagnosis challenge

The Science behind the Tip

Diagnosis and follow-up of glaucoma is challenging in eyes with small optic discs (height < 1.2 mm or surface area < 1.15 mm², as measured with a slit lamp beam or imaging device, respectively)^{1,2}. In healthy eyes, these discs either have no detectable cups, or very small ones due to crowding of the optic nerve fibres in a small scleral canal. Typical glaucomatous disc changes such as thinning of the neuroretinal rim and an abnormally high cup-to-disc ratio, are late and mild¹. Small optic discs thus can have misleadingly low cup-to-disc ratios and visual field loss often occurs despite a normal disc appearance. Parapapillary chorioretinal atrophy can be more apparent than changes at the disc itself and may thus be a more sensitive indicator of structural glaucomatous damage¹.

Glaucomatous small optic discs have to be differentiated from buried optic nerve drusen in the presence of subtle visual field defects, especially when intraocular pressure is normal³.

Careful follow-up may be all the more important as small optic discs may have less reserve capacity as compared to normal size discs. Optic nerve fibres may be fewer in number, possibly making these discs more vulnerable to glaucomatous insults⁴.

References

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