



**When intraocular pressure lowering does not halt visual field progression in an eye which has classic features of glaucoma (glaucoma cupping, retinal nerve fiber loss and normal visual acuity and colour vision), a diagnosis of compressive optic neuropathy should be considered. While disc pallor is recognised to be a sign of potential ominous disease, it should be appreciated that in the early stages of compressive optic neuropathy, the disc may maintain its normal colour**

### ***The Science behind the Tip***

Axonal loss decreases the volume of the disc, and if loss is concentrated in one area without significant gliosis, cupping without pallor can result. But axonal loss from other causes also decreases the volume of the disc<sup>1,2</sup>.

An often unrecognized red flag is that there can be significant visual field dysfunction from conduction block caused by a compressive lesion, without enough axonal loss to cause disc pallor<sup>3</sup>. In a disc with physiological cupping, it may be even easier to mistake the visual field loss as being related to glaucoma.

### ***References***

1. Bianchi-Marzoli S, Rizzo JF, 3rd, Brancato R, Lessell S. Quantitative analysis of optic disc cupping in compressive optic neuropathy. *Ophthalmology* 1995;102(3):436-40.
2. O'Neill EC, Danesh-Meyer HV, Kong GX, et al. Optic disc evaluation in optic neuropathies: the optic disc assessment project. *Ophthalmology* 2011;118(5):964-70.
3. Danesh-Meyer HV, Papchenko T, Savino PJ, et al. In vivo retinal nerve fiber layer thickness measured by optical coherence tomography predicts visual recovery after surgery for paraschiasmal tumors. *Invest Ophthalmol Vis Sci* 2008;49(5):1879-85.