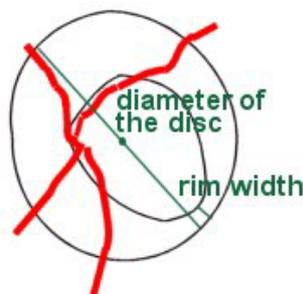


⊗ Rim/disc ratio is a more sensitive parameter than cup/disc ratio

The Science behind the Tip

Routine fundus observation of the optic disc is helpful in the diagnosis of early glaucoma and it is often key in the detection of normal tension glaucoma. Traditionally, the amount of cupping in the vertical axis, described as the vertical cup/disc ratio, is checked to evaluate the extent of nerve fiber loss. The reproducibility and reliability of this ratio is however not high. Rim/disc ratio, i.e. radial width of the neuroretinal rim at its thinnest point compared to the diameter of the disc in the same axis (divided into tenths), can be evaluated instead¹.

In the figure, the rim/disc ratio of < 0.1 in the inferotemporal sector is highly suggestive of glaucoma. It should be checked whether the location of this rim thinning correlates with a visual field defect in the corresponding superonasal quadrant.



Although nowadays sophisticated technology is available for the follow-up of structural glaucoma damage, it is also possible to estimate glaucoma progression with the ophthalmoscope by tracking (1) the amount of rim thinning and (2) the circumferential extent of rim thinning or absence. Further, disc hemorrhages typically occur in the area of rim thinning and

are often a sign of poorly controlled disease.

Like cup/disc ratio, rim/disc ratio is a function of disc size. Larger discs have thinner rims. The *Disc Damage Likelihood Scale* (DDLS) that attempts to stage the amount of nerve fiber loss by rim/disc ratio evaluation, differentiates between small, average and large optic discs¹.

References

1. Spaeth GL, Henderer J, Liu C, et al. The disc damage likelihood scale: reproducibility of a new method of estimating the amount of optic nerve damage caused by glaucoma. *Trans Am Ophthalmol Soc.* 2002;100:181-6.