



The early diagnosis of glaucoma and early detection of glaucoma progression should be enhanced by the use of spectral domain OCT measurement of the neuro retinal rim

The Science behind the Tip

Recent studies using spectral domain ocular coherence tomography (SD OCT) measurement of the optic disc margin show that current methods of measuring the optic disc margin are not accurate¹. The disc margin is not the true anatomical outer border of the neuro-retinal rim because of variable, invisible extensions of Bruch's membrane². The opening in Bruch's membrane represents the logical outer border of the rim.

Current regional data acquisition and analysis algorithms assume the same anatomical location in different individuals, potentially yielding errors in regional rim or peri-papillary nerve fibre quantification. SD OCT imaging of the Bruch's membrane opening has been shown to detect changes in the glaucomatous optic nerve head more accurately than disc margin-based assessment³. It can also detect progressive optic nerve head change in experimental glaucoma in primates⁴.

By incorporating these new SD OCT-detected anatomical quantitative features of the optic nerve head, glaucoma should be diagnosed at an earlier stage in future and glaucoma progression should be more accurately detected than with present techniques.

References

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