



Ocular coherence tomography (OCT) should be used cautiously in the context of uveitic glaucoma

The Science behind the Tip

Patients with uveitis have a heightened risk of developing secondary glaucoma. Ocular Coherence Tomography (OCT) imaging is becoming a widely used technology for diagnosis and monitoring of glaucoma.

The retinal nerve fibre thickness on OCT is noted to be higher in patients with uveitic glaucoma, particularly when the uveitis is active^{1,2,3} and this reflects leakage at the optic nerve⁴. The optic nerve rim can erroneously appear normal due to subclinical nerve fibre layer oedema. This can potentially lead to less aggressive management of intraocular pressure.

After medical therapy to treat uveitis, resolution of oedema may lead to increased optic nerve cupping and a reduction in retinal nerve fibre layer thickness. These changes could be misinterpreted as glaucoma progression if OCT parameters are not assessed in the context of other clinical findings.

References

- 1) Moore DB, Glenn JJ, Asrani S. Retinal nerve fibre layer thickness measurements: uveitis, a major confounding factor. *Ophthalmology* 2015; 122:511-517
- 2) Bellocq D, Maucort-Boulch D, Kodjikian L et al. Correlation in retinal nerve fibre layer thickness in uveitis and healthy eyes using scanning laser polarimetry and optical coherence tomography. *Br J Ophthalmol* 2017 101: 309-315
- 3) Kriegel MF, Heiligenhaus A, Heinz C. Influence of uveitis on Bruch's membrane opening minimum rim width and retinal nerve fibre layer thickness measurements. *Br J Ophthalmol* 2018 epub DOI:10.1136/bjophthalmol-2018-313016
- 4) Heinz C, Kogelboom K, Heiligenhaus A. Influence of optic disc leakage on objective optic nerve head assessment in patients with uveitis. *Graefes Arch Clin Exp Ophthalmol* 2016 254: 361-4