



## Highlights from this issue

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Keith Barton , James Chodosh , Jost B Jonas , *Editors in chief***Glaucoma in the Northern Ireland Cohort for the Longitudinal Study of Ageing (NICOLA): cohort profile, prevalence, awareness and associations (see page 1492)**

The crude prevalence of glaucoma in Northern Ireland of 2.83% (95% CI 2.31%, 3.46%) is comparable to other European population-based studies. Approximately two thirds of people with glaucoma were undiagnosed. Associations with glaucoma were consistent with current understanding of the disease.

**Selective laser trabeculoplasty vs medication for open-angle glaucoma: systematic review and meta-analysis of randomised clinical trials (see page 1500)**

Selective laser trabeculoplasty is a safe and effective IOP-lowering therapy for open-angle glaucoma. The patients received selective laser trabeculoplasty need significant lower number of medications.

**Anterior chamber particles are associated with reduction of intraocular pressure after selective laser trabeculoplasty (see page 1508)**

The number of the anterior chamber particles evaluated with anterior segment optical coherence tomography immediately after selective laser trabeculoplasty correlates significantly with intraocular pressure reduction at least for 3 months after the procedure.

**Efficacy and safety evaluation of benzalkonium chloride preserved eye-drops compared with alternatively preserved and preservative-free eye-drops in the treatment of glaucoma: a systematic review and meta-analysis (see page 1512)**

This systematic review, based on 16 randomised clinical trials, could not determine significant differences in efficacy or safety between benzalkonium chloride-preserved prostaglandin analogue and beta-blocker eye drops compared to alternatively preserved or preservative-free eye drops.

**First-in-human continuous 24-h measurement of intraocular pressure and ocular pulsation using a novel contact lens sensor (see page 1519)**

A first-in-man study is reported using contact lens that measures intraocular pressure and ocular pulsation in mm Hg. This novel device is also able to detect physiological and induced intraocular pressure variations.

**The effect of partial posterior vitreous detachment on spectral-domain optical coherence tomography retinal nerve fibre layer thickness measurements (see page 1524)**

Among glaucoma suspects, eyes with partial posterior vitreous detachments, compared to eyes without, were associated with greater average, superior, and inferior retinal nerve fibre layer thickness measurements.

**Comparison of central visual sensitivity between monocular and binocular testing in advanced glaucoma patients using imo perimetry (see page 1528)**

In glaucomatous eyes, better-eye central sensitivity was better and worse-eye central sensitivity was poorer, under binocular than monocular conditions. Monocular visual-field measurements should be carefully considered when assessing advanced glaucoma patients.

**The effect of low dose atropine on myopia progression, pupil diameter and accommodative amplitude—low dose atropine and myopia progression (see page 1535)**

In a one-year study, the myopia progression effects of low dose atropine were dose dependent however the side effect profile was independent of dosage.

**Objectively measured near work, outdoor exposure and myopia in children (see page 1542)**

According to the objective data, the time spent with a light intensity of >3000 lux was a protective factor against myopia, while the time spent with a working distance of <20 cm was a risk factor for myopia.

**Long-term (20-year) real-world outcomes of intravenous chemotherapy (chemoreduction) for retinoblastoma in 964 eyes of 554 patients at a single centre (see page 1548)**

A 20-year analysis of 964 eyes with retinoblastoma treated with intravenous chemotherapy revealed tumour control (avoidance of enucleation and external beam radiotherapy) for Groups A, B, and C at ≥91%, D at 71%, and E at 32% (p<0.001).

**Comparison of OCT angiography in children with a history of intravitreal injection of ranibizumab vs laser photocoagulation for retinopathy of prematurity (see page 1556)**

In this cross-sectional study, we found that the central foveal vessel length density and perfusion density, the foveal avascular zone area and central foveal thicknesses of children who had undergone different treatments, might vary.

**Three-year follow-up of choroidal neovascularisation in eyes of chronic central serous chorioretinopathy (see page 1561)**

After an average of 3 years of follow, most patients remained clinically stable without the persistence of subretinal fluid despite significant structural changes in choroidal neovascularisation on optical coherence tomography angiography.

**Comparison of various surgical techniques for optic disc pit maculopathy: vitrectomy with internal limiting membrane (ILM) peeling alone vs inverted ILM flap 'plug' vs autologous scleral 'plug' (see page 1567)**

Resolution of maculopathy in cases of optic disc pits is swifter if the pit is plugged using either an inverted internal limiting membrane flap or scleral flap, compared to vitrectomy alone.

**ORCA study: Real-world vs reading centre assessment of disease activity of neovascular age-related macular degeneration (nAMD) (see page 1573)**

Lack of treatment despite correct identification of CNV activity was detected in the ORCA study. Not only can misinterpretation of SD-OCT lead to vision loss over time, but also lack of treatment despite correct interpretation.

**Comparison of true-colour wide-field confocal scanner imaging with standard fundus photography for diabetic retinopathy screening (see page 1579)**

Vision-threatening diabetic retinopathy features which are missed with standard fundus cameras, can be detected with the true-colour, wide-field EIDON confocal scanner. Clinically relevant differences in grading result in more referrals for sight-threatening disease when using the EIDON.

**Effectiveness of an innovative and comprehensive eye care model for individuals in residential care facilities: results of the residential ocular care (ROC) multicentred randomised controlled trial (see page 1585)**

In this randomised controlled trial, we showed that an integrated eye assessment and intervention programme improved near vision, emotional well-being and perceived vision quality in the short-term for visually impaired residential care dwellers in Australia.

**Normative patterns and factors associated with presbyopia progression in a multiethnic Asian population: the Singapore Epidemiology of Eye Diseases Study (see page 1591)**

We found that the overall near addition power in Asians was lower than current recommended guidelines. Additionally, Malays demonstrated the highest rate of presbyopia progression in comparison to Chinese and Indians.

**Visual and refractive outcomes and complications in femtosecond laser-assisted vs conventional phacoemulsification cataract surgery: findings from a randomised, controlled clinical trial (see page 1596)**

Post-operative refractive and visual outcomes were comparable between femtosecond laser-assisted cataract surgery and conventional phacoemulsification surgery. Complication rates were low in both groups.

**Long-term visual outcomes of the boston type i keratoprosthesis in canada (see page 1601)**

A retrospective cohort study of consecutive Boston type I keratoprosthesis procedures showed 61.8% of eyes maintained better than preoperative visual acuity 7 years post-operatively; the main risk factor for irreversible vision loss was preoperative glaucoma.

**Three-year follow-up of accelerated transepithelial corneal cross-linking for progressive paediatric keratoconus (see page 1608)**

Keratometry and corneal thickness remained stable after accelerated transepithelial corneal cross-linking (ATE-CXL) for the paediatric progressive keratoconus patients during the 36-month follow-up period.

**Microsporidial stromal keratitis: characterisation of clinical features, ultrastructural study by electron microscopy, and efficacy of different surgical modalities (see page 1613)**

The current study highlights that medical therapy is ineffective for microsporidial stromal keratitis and surgical intervention is a requisite to prevent the extensive spread of mature spores in the corneal stroma; however, surgical therapy was associated with overall poor outcome.

**Observation of nine previously reported and ten unreported SLC4A11 mutations among 20 Iranian CHED probands and identification of an MPDS mutation as possible cause of CHED and FECD in one family (see page 1621)**

Screening of SLC4A11 in CHED patients and exome sequencing revealed unreported mutations and identification of MPDZ which, similarly to SLC4A11, affects membrane transport and is a possible cause of CHED and FECD in one family.