



Highlights from this issue

doi:10.1136/bjophthalmol-2020-317829

Keith Barton , James Chodosh , Jost B Jonas , *Editors in chief***Thirty-five years trend in the prevalence of refractive error in Austrian conscripts based on 1.5 million participants (see page 1338)**

In Austrian conscripts, the prevalence of myopia almost doubled between 1983 and 2017. It was constantly lower yet increased more rapidly among those with low education levels.

Outcomes in randomised controlled trials of multifocal lenses in cataract surgery: the case for development of a core outcome set (see page 1345)

There is variability in specification and reporting of outcomes in randomised controlled trials of multifocal lenses. This is problematic for conducting systematic reviews and is a source of research waste. A core outcome set is needed.

Correlation between lens thickness and lens density in patients with mild to moderate cataracts (see page 1350)

This study objectively analysed lens thickness and lens density in mild to moderate cataracts and found that lens thickness is independent of lens density in the early stages after accounting for age, axial length, and anterior chamber depth.

Hybrid Descemet Membrane Endothelial Keratoplasty (H-Dmek): results of a donor insertion pull-through technique using donor stroma as carrier (see page 1358)

Hybrid DMEK offers a controlled “pull-through” technique of donor insertion in the “endothelium-in” configuration, which may be useful especially in complicated eyes.

Conjunctival lymphangiectasia as a biomarker of severe systemic disease in Ser77Tyr hereditary transthyretin amyloidosis (see page 1363)

Conjunctival lymphangiectasia is common in patients with hereditary transthyretin amyloidosis carrying the Ser77Tyr mutation. In these patients, conjunctival lymphangiectasia is associated with severe neurological disease and amyloid cardiomyopathy.

Epidemiology of invasive ocular surface squamous neoplasia in Canada during 1992–2010 (see page 1368)

The mean annual age-standardised incidence rate of IOSSN in Canada during 1992–2010 was 0.45 cases per million individuals per year with an average annual percentage increase in incidence of 4.5%. The reported IOSSN trends in Canada are consistent with those observed in the United States.

Effect of a formulated eye drop with *leptospermum* spp honey on tear film properties (see page 1373)

A *Leptospermum* spp formulated eye drop was effective in reducing tear film evaporation rate and was more effective for improving symptoms related to dry eye compared to a conventional lubricant eye drop in this symptomatic population.

Outcomes of phacoemulsification combined with two iStent inject trabecular microbypass stents with or without endocyclophotocoagulation (see page 1378)

A greater reduction in intra-ocular pressure was observed after phacoemulsification combined with two iStents and endocyclophotocoagulation than after phacoemulsification combined with iStents alone.

Comparison of early versus late laser goniopuncture following deep sclerectomy for the management of open-angle glaucoma (see page 1384)

There is a non-significant trend towards late laser goniopuncture being more effective after deep sclerectomy with mitomycin C. Laser goniopuncture is shown to be a safe and effective procedure for lowering IOP post deep sclerectomy.

Predictors of selective laser trabeculoplasty success in open angle glaucoma or ocular hypertension: does baseline tonography have a predictive role? (see page 1390)

In this study pre-treatment intraocular pressure rather than tonographic outflow facility was observed to be a determinant in the success of primary selective laser trabeculoplasty. Perhaps there is some resistance at the level of Schlemm’s canal.

Development and validation of a machine learning, smartphone-based tonometer (see page 1394)

Intraocular pressure measurements using a prototype machine learning, smartphone-based tonometer compared similarly with Goldmann applanation tonometry and other tonometers in current clinical use.

Diagnostic performance of modern imaging instruments in glaucoma screening (see page 1399)

The applicability of modern imaging devices for glaucoma screening was evaluated in a randomised sample of 3039 middle-aged subjects of a birth cohort.

The performance of all the imaging parameters was only moderate.

Progression from ocular hypertension to visual field loss in the English hospital eye service (see page 1406)

In this electronic medical record study, the 5-year conversion rate from ocular hypertension to glaucoma was 17.5%.

Accuracy of the ISNT rule and its variants for differentiating glaucomatous from normal eyes in a population-based study (see page 1412)

In a population-based study, the ISNT rule on optic disc photography, displayed a moderate sensitivity and specificity in the differentiation of normal from glaucomatous eyes. The translation of the ISNT rule to RNFL thickness on OCT was of limited value.

Evaluation of contrast sensitivity in patients with advanced glaucoma: comparison of two tests (see page 1418)

Despite near-normal visual acuity, patients with advanced glaucoma (MD < -15 dB) had profound losses in contrast sensitivity, with substantial variations between patients. Contrast sensitivity testing may offer clinically valuable information on the visual function in these patients.

Age as a risk factor for steroid-induced ocular hypertension in the non-paediatric population (see page 1423)

Older patients had a significantly lower adverse elevation of intraocular pressure after intravitreal dexamethasone injection than younger patients. Younger age may be a risk factor for steroid-induced ocular hypertension, even in adult patients.

Retinal vessel diameter changes after 6 months of treatment in the Idiopathic Intracranial Hypertension Treatment Trial (see page 1430)

In this study retinal changes were observed in association with reducing intracranial pressure. Retinal venule diameters reduced during treatment with diet or diet in combination with acetazolamide in subjects with idiopathic intracranial hypertension. This was correlated with an improvement in papilloedema.

The relation between retinal vessel diameter and posterior segment optical coherence tomography variables in middle-aged Caucasians: the Northern Finland Birth Cohort Eye Study (see page 1435)

This study explored with correlation of retinal vessel diameter with both macular and optic nerve head parameters, with the intention of using these as biomarkers for future studies investigating the vascular aetiology of eye diseases.

Retinal pigment epithelial atrophy after anti-vascular endothelial growth factor therapy for polypoidal choroidal vasculopathy (see page 1443)

The risk of retinal pigment epithelial (RPE) atrophy in polypoidal choroidal vasculopathy patients undergoing anti-vascular endothelial growth factor therapy is not low. Thinner subfoveal choroid at baseline is associated with an increased risk of RPE atrophy development following treatment.

Genetic influence on macular retinal nerve fibre layer thickness according to retinal subfield (see page 1448)

Heritability of macular retinal nerve fibre layer thickness varies across the Early Treatment Diabetic Retinopathy Study macular subfields.

OCTA characterisation of microvascular retinal alterations in patients with central serous chorioretinopathy (see page 1453)

OCTA enables the identification of retinal microvascular alterations in eyes affected by central serous chorioretinopathy.

Orbital MRI vs fundus photography in the diagnosis of optic nerve hypoplasia and prediction of vision (see page 1458)

In comparison to the fundus photography, orbital MRI remains an imperfect tool for the diagnosis of optic nerve hypoplasia, but a fair predictor of eventual vision outcome.

The effects of plaque brachytherapy and proton beam radiotherapy on prognostic testing: a comparison of uveal melanoma genotyped by microsatellite analysis (see page 1462)

In this cohort of 407 UM patients genotyped by microsatellite analysis (MSA), radiotherapy neither adversely affected genetic testing of UM by MSA nor increased the risk of metastatic death when UM is sampled before radiotherapy.

Association of toll-like receptor 10 polymorphisms with paediatric idiopathic uveitis in Han Chinese (see page 1467)

In this study, toll-like receptor 10 gene polymorphisms were associated with paediatric idiopathic uveitis in Han Chinese.

Association of the ZC3H11B, ZFHX1B and SNTB1 genes with myopia of different severities (see page 1472)

ZC3H11B rs4373767, ZFHX1B rs13382811, and SNTB1 rs7839488 were associated with extreme myopia, but not with moderate or mild myopia. It suggests that those three genes are risk factors for developing higher-grade of myopia.