



Highlights from this issue

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Microbiological evaluation of corneal and contact lens cultures in contact lens-associated bacterial keratitis (see page 600)

Contact lens microbiological cultures provided additional information in patients with microbial keratitis. However, the overall level of agreement with corneal cultures was low.

Primary acquired melanosis/ melanoma: utility of conjunctival MAP biopsy (see page 605)

Map biopsy is helpful for risk stratification and appropriate management of patients.

Human leukocyte antigen (HLA) association with Stevens-Johnson Syndrome (SJS) / toxic epidermal necrolysis (TEN) patients with severe ocular complications in Han Chinese (see page 610)

Adverse drug reactions involve strong genetic predisposition. The HLA-A*02:07 and HLA-B*46:01 alleles were significantly associated with the development of severe ocular complications among Han Chinese patients with SJS/TEN induced by cold medicines, which is distinct from previous reports.

Corneal sub-basal nerve plexus microneuromas in individuals with and without dry eye (see page 616)

This retrospective study identified corneal microneuromas in individuals with and without dry eye symptoms, using in vivo confocal microscopy. Microneuroma presence was not found to be associated with clinical features suggestive of neuropathic corneal pain in our study population.

Refractive accuracy in eyes undergoing combined cataract extraction and Descemet membrane endothelial keratoplasty (see page 623)

We present a modification in corneal power calculation using a thick lens formula for eyes undergoing combined cataract extraction and DMEK. In this retrospective study, the corneal power modification was associated with improved refractive outcomes.

Refractive change and incidence of myopia among rural Chinese children: the Handan offspring myopia study (see page 628)

A very low myopic refractive change ($-0.15\text{D}/\text{year}$), axial change ($0.11\text{ mm}/\text{year}$), and myopia incidence (annual 6.3%) was found in rural Chinese children aged 6–17 years. Larger difference between cycloplegic and non-cycloplegic refraction was found to be associated with more rapid myopic refractive change.

Development and validation of a deep learning system to screen vision-threatening conditions in high myopia using optical coherence tomography images (see page 633)

Optical coherence tomography images were successfully used to detect common vision-threatening conditions in high myopia by deep learning.

Short term efficacy of latanoprostene bunod for the treatment of open-angle glaucoma and ocular hypertension: A systematic literature review and a network meta-analysis (see page 640)

Latanoprostene bunod is, similarly to other prostaglandin analogues, effective in lowering intraocular pressure for the treatment of open-angle glaucoma and ocular hypertension.

Trabeculectomy in diabetic patients: subconjunctival mitomycin C with or without intravitreal bevacizumab (see page 648)

Trabeculectomy has a greater rate of failure in diabetic patients. This randomised clinical trial indicates a synergistic effect of intravitreal bevacizumab (2.5 mg) and subconjunctival Mitomycin-C in success of trabeculectomy in diabetic patients without neovascular glaucoma.

Screening first-degree relatives of glaucoma patients reveals barriers to participation (see page 655)

A glaucoma screening campaign targeting first-degree relatives of known glaucoma patients in South India had poor participation rates. The major barrier to participation was distance from the screening site and associated indirect costs.

Comparing the usefulness of a new algorithm to measure visual field using the variational Bayes linear regression in glaucoma patients, to the Swedish interactive thresholding algorithm (see page 660)

Visual field measurements with Variational Bayes Linear Regression yielded similar visual sensitivities and test-retest reproducibility with Swedish interactive threshold standard algorithm. In contrast, measurement duration was significantly shorter than Swedish interactive threshold standard algorithm.

OCT-angiography detects longitudinal microvascular changes in glaucoma: a systematic review (see page 667)

We performed a systematic review of studies of longitudinal changes in peripapillary and macular vessel density (VD) in glaucoma. VD was lower in glaucoma. Measures are suggested to decrease heterogeneity and increase the quality of studies.

Higher prevalence of fundus haemorrhages in early (nest study) as compared with late screened (SUNDROP study) newborn populations (see page 676)

Prevalence of fundus haemorrhages in the newborn infant is dependent on the time after birth at which the infant is screened. We developed a model to predict the probability of newborn haemorrhage given screening time.

Quantitative OCT angiography of the retinal microvasculature and choriocapillaris in highly myopic eyes with myopic macular degeneration (see page 681)

Retinal microcirculation significantly decreased with increasing severity of myopic macular degeneration (MMD), while sparser choriocapillaris was associated with longer axial length in early stage MMD.

Natural history of central sparing in geographic atrophy secondary to non-exudative age-related macular degeneration (see page 689)

The residual effective radius - the square root of $(\text{residual area}/\pi)$ - of central 1 mm diameter zone in eyes with geographic atrophy declines linearly over approximately 13 years at 0.038 mm/year.

CRB1-associated retinal dystrophies in a Belgian cohort: genetic characteristics and long-term clinical follow-up (see page 696)

CRB1-associated retinal degenerations encompass a phenotypic spectrum. Blindness can occur typically from the first decade of life (Leber congenital amaurosis) to the fifth decade of life (retinitis pigmentosa). Complications include cystoid maculopathy, Coats' disease-like exudates, and uveitis.

Association of ambient air pollution with age-related macular degeneration and retinal thickness in UK Biobank (see page 705)

Age-related macular degeneration (AMD) is the leading cause of vision loss among the elderly in high income countries. Increased exposure to air pollution may be associated with AMD and differences in retinal layer thickness.

Swept source OCTA quantification of capillary closure predicts ETDRS severity staging of NPDR (see page 712)

In type-two diabetes, swept source OCTA shows that retinal capillary closure

predominates initially in the macula and as the disease progresses in more peripheral retinal regions. This offers a simple and objective alternative to ETDRS severity grading.

Plexus-Specific retinal capillary avascular area in exudative age-related macular degeneration with projection-resolved OCT angiography (see page 719)

Projection-resolved optical coherence tomography angiography detected reduced retinal perfusion in the superficial vascular complex, the intermediate capillary plexus, and deep capillary plexus in eyes with exudative age-related macular degeneration compared with age-matched controls.

Optimising prediction of early metastasis-free survival in uveal melanoma using a four-category model incorporating gene expression profile and tumour size (see page 724)

By combining GEP and largest basal diameter (LBD), patients can be separated into four prognostic groups. In

our dataset, this easy-to-use, four-group system was more predictive than the eighth edition AJCC stage.

Optic nerve sheath diameter changes at high altitude and in acute mountain sickness: meta-regression analyses (see page 731)

To our knowledge, this is the first systemic review and meta-regression analysis to evaluate the relation of changes in optic nerve sheath diameter to altitude and time spent at altitude in subjects with acute mountain sickness.

The UK national artificial eye questionnaire study: comparisons between cosmetic shell and artificial eye users. Part 2: maintenance, management and quality of life (see page 736)

In this large, national questionnaire study the reported experiences of cosmetic shell wearers were compared with those of artificial eye wearers. The results should reinforce the gain in popularity of cosmetic shells in applicable cases.