



## Highlights from this issue

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**Long-term follow-up of cystinosis patients treated with 0.55% cysteamine hydrochloride (see page 608)**

Results from the French ATU cohort to confirm the safety, efficacy and tolerability in real-world clinical practice of a 0.55% cysteamine hydrochloride ophthalmic solution for cystinosis are presented.

**Late term topical tacrolimus for subepithelial infiltrates resistant to topical steroids and cyclosporine secondary to adenoviral keratoconjunctivitis (see page 614)**

Topical tacrolimus 0.03% ointment might show efficacy for the late term treatment of the discomfort symptoms and visual acuity problems related to the subepithelial infiltrates secondary to adenoviral keratoconjunctivitis even 2 years after onset.

**15-year incidence rate and risk factors for pterygium in the southern Indian state of Andhra Pradesh (see page 619)**

The 15 year incidence rate of pterygium among people aged 30 years and above in the longitudinal Andhra Pradesh Eye Disease Study (APEDS III) rural cohort was 25.2 per 100 person-years. Risk factors were likely associated with exposure to UV light warranting preventive strategies.

**Four-year observation of the changes in corneal endothelium cell density and the correlated factors after implantable collamer lens V4c implantation (see page 625)**

The vault after implantable Collamer Lens V4c implantation could be major factor influencing the changes in corneal endothelium cell density in long term.

**A randomised controlled trial comparing femtosecond laser-assisted cataract surgery versus conventional phacoemulsification surgery: 12-month results (see page 631)**

This 12 month RCT found no difference between femtosecond laser-assisted cataract surgery and conventional phacoemulsification in any of the parameters tested. This is further randomised

evidence that this expensive technology is not justified by improved surgical outcomes when compared to non-laser manual cataract surgery.

**Evolving consensus for immunomodulatory therapy in non-infectious uveitis during the COVID-19 pandemic (see page 639)**

Consensus guidelines to guide the immunomodulatory therapy (IMT) in patients with non-infectious uveitis during the evolving COVID-19 pandemic were proposed based on global uveitis expertise to bridge the gap between clinical-needs and the absence of evidence-based medicine. Highest consensus was achieved for not initiating IMT in patients who have suspected or confirmed COVID-19, and for using local over systemic corticosteroid therapy in patients who are at high and very high-risk for severe or fatal COVID-19.

**OCT changes in peri-tumour normal retina following ruthenium-106 and proton beam radiotherapy for uveal melanoma (see page 648)**

Treatment of uveal melanoma with ruthenium-106 plaque brachytherapy causes rapid destruction of outer retinal layers in comparison to proton beam radiotherapy.

**Impact of myopia on the association of long-term intraocular pressure fluctuation with the rate of progression in normal-tension glaucoma (see page 653)**

Long-term intraocular pressure fluctuation was related to faster visual field deterioration only in myopic normal-tension glaucoma (NTG) eyes, not in non-myopic NTG eyes

**Use of a novel telemetric sensor to study interactions of intraocular pressure and ganglion cell function in glaucoma (see page 661)**

We demonstrate the feasibility of simultaneous continual telemetric measurements of intraocular pressure (IOP) and steady-state pattern electroretinography and report increased IOP and reduced

ganglion cell responses for the lower eye during lateral position.

**Albuminuria and primary open-angle glaucoma: the Singapore Chinese eye study (see page 669)**

Macroalbuminuria was independently associated with primary open-angle glaucoma in this Chinese population, independent of kidney function status.

**Progressive retinal nerve fibre layer thinning and choroidal microvasculature drop-out at the location of disc haemorrhage in glaucoma (see page 674)**

Progressive retinal nerve fibre layer thinning was spatially consistent with the location of choroidal microvasculature dropout accompanied by subsequent disc haemorrhage, and continued to progress at the same location, in primary open-angle glaucoma.

**Using an open-source tablet perimeter (Eyecatcher) as a rapid triage measure in a glaucoma clinic waiting area (see page 681)**

We describe a novel 'triage' perimeter (Eyecatcher), which combines low-cost eye-tracking technology with a portable tablet computer. We assess its feasibility as a pragmatic means of identifying the presence or absence of visual field abnormalities.

**Reduced vessel density in deep capillary plexus correlates with retinal layer thickness in choroideremia (see page 687)**

This paper shows the remarkable involvement of both the inner and outer retinal layers in choroideremia, separately analysing the atrophic retina and the apparently preserved central islet. These structural OCT alterations reveal significant correlations with the retinal vascular network impairment occurring in this disease.

**USH2A variants in Chinese patients with Usher syndrome type II and non-syndromic retinitis pigmentosa (see page 694)**

The research included the largest cohort of Chinese patients with

USH2A-associated syndromic and non-syndromic retinitis pigmentosa, revealed the distinct variant profile of USH2A gene and identified the molecular and clinical variability of these two groups.

### **Changes in choroidal structure following intravitreal aflibercept therapy for retinal vein occlusion (see page 704)**

Greater choroidal thickness in eyes with retinal vein occlusion may be due to choroidal stromal oedema originating from high intraocular vascular endothelial growth factor levels rather than choroidal vessel dilation.

### **Examining the added value of microperimetry and low luminance deficit for predicting progression in age-related macular degeneration (see page 711)**

This study examined whether visual function measures including microperimetry and low luminance visual acuity parameters could be used to improve the prediction of progression from the

early stages to late complications of age-related macular degeneration.

### **Apex: a phase II randomised clinical trial evaluating safety and preliminary efficacy of oral x-82 to treat exudative AMD (see page 716)**

This is the first phase II clinical trial demonstrating efficacy in treating exudative macular degeneration with an oral medication. Unfortunately, the study was terminated prematurely (although after achieving its primary endpoint) for poor tolerability and safety

### **Prospective evaluation of an artificial intelligence-enabled algorithm for automated diabetic retinopathy screening of 30,000 patients (see page 723)**

AI systems could be safely used to screen for high risk diabetic retinopathy in real-world settings, halving the workload for manual human graders, improving the efficiency and reducing the cost of diabetic eye screening programmes.

### **Epidemiology of visual impairment, sight-threatening or treatment-requiring diabetic eye disease in children and young people in the UK: findings from DECS (see page 729)**

Our findings suggest that the nature and population burden of diabetic eye disease in children and young people in the UK is too low to be the sole justification for routine universal retinal examination as a secondary preventive strategy against visual impairment. The broader value of eye screening to improving self-management of diabetes should be investigated.

### **Optical coherence tomography-angiography for monitoring neovascularisations in macular telangiectasia type 2 (see page 735)**

We emphasise the role of optical coherence tomography-angiography (OCT-A) for monitoring neovascularisations (NV) in macular telangiectasia type 2 (MacTel), demonstrate its advantages over B-scan-OCT-imaging and propose an OCT-A-controlled treatment-regime to prevent NV-progression in MacTel.