

# Highlights from this issue

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Harminder S Dua and Arun D Singh, *Editors-in-Chief*

## Trabeculectomy with mitomycin C in advanced glaucoma

Stead and King determined the medium-term intraocular pressure (IOP) control and visual outcomes in 103 patients with advanced glaucoma (MD  $-20$  dB or above) undergoing trabeculectomy with mitomycin C. At 5 years, 85% had IOP of  $<16$  mm Hg, and 96% had an IOP of  $<21$  mm Hg. Mean MD for the group as a whole and for individual patients remained stable. Twenty-seven per cent patients experienced a significant reduction in acuity (attributable to trabeculectomy in about 10% of cases). The only preoperative determinant for reduction in VA was a low preoperative MD. (See page 960)

## Adjuvant 5-fluorouracil for localised OSSN

Rudkin and Muecke prospectively studied outcome of localised non-invasive ocular surface squamous neoplasia (OSSN) wherein topical 5-fluorouracil (5-FU 1%) was used as an adjuvant to surgical excision and cryotherapy. Fifty-five cases were primary and 10 cases were of recurrent tumours. Surgical margins were involved in 29% of primary and 60% of recurrent cases. Irrespective of the surgical margins, a single cycle of 5-FU 1% was administered, four times a day for 2 weeks continuously. Only a single case of recurrence (1.5%) was observed. Fifty-seven per cent of patients developed short-term reversible 5-FU toxicity (lid toxicity, superficial keratitis and corneal epithelial defects). (See page 947)

## Novel anterior-chamber angle measurements

Cheung *et al* assessed anterior chamber angle (ACA) width quantitatively with high-definition optical coherence tomography (HD-OCT) using Schwalbe line as a new anatomical landmark independent of the scleral spur location. The authors developed a computer-aided program to define two new quantitative parameters for assessing ACA width: Schwalbe line-angle opening distance and Schwalbe line-trabeculareiris space area. The analysis of 117 HD-OCT images revealed

significant correlation of Schwalbe line-angle opening distance and Schwalbe line-trabeculareiris space area with scleral spur parameters and gonioscopic grading. Novel Schwalbe line-based angle parameters may be useful to quantify ACA width and to assess for risk of angle closure. (See page 955)

## Ciliary body medulloepithelioma: association with pleuropulmonary blastoma

Priest *et al* from the International Pleuropulmonary Blastoma Registry report an association between ciliary body medulloepithelioma (CBME), a rare embryonal ocular tumour of children and pleuropulmonary blastoma (PPB), a sentinel disease of the PPB Family Tumour and Dysplasia Syndrome. Germline mutations of DICER1 gene, a key regulator of gene silencing, underlie this syndrome. Four cases of CBME (one clinical diagnosis, three histopathological diagnosis) were observed among 550–600 PPB cases. Ophthalmologists should be aware that CBME can occur in PPB patients or their relatives and that CBME may indicate a hereditary tumour predisposition. (See page 1001)

## Preferential hyperacuity perimeter in assessing responsiveness to ranibizumab therapy for exudative AMD

Querques *et al* investigated the ability of the preferential hyperacuity perimeter (PHP) test to assess responsiveness to ranibizumab therapy for exudative age-related macular degeneration (AMD) in 14 consecutive patients with newly diagnosed choroidal neovascularisation. The mean PHP metamorphopsia test score improved significantly from 20.4 at baseline to 9.2 after the single ranibizumab injection. The mean reduction in central macular thickness, maximal retinal thickness at the fovea, maximal height of subretinal fluid, maximal diameter of the largest retinal cyst and maximal height of pigment epithelial detachment (as evaluated by spectral domain optical coherence tomography (SD OCT)) closely reflected the functional improvements as evaluated by PHP. (See page 986)

## Descemet's membrane automated endothelial keratoplasty (DMAEK)

Pereira *et al* investigated whether the stromal rim that carries the bare endothelial graft in Descemet's membrane automated endothelial keratoplasty (DMAEK) has any effect on final visual outcome in 24 DMAEK eyes and 22 Descemet's membrane endothelial keratoplasty eyes (without stromal rim). Median Snellen acuities, incidence of visual field defects, visual complaints of glare, halos, light sensitivity and night driving difficulties were comparable between DMAEK and Descemet's membrane endothelial keratoplasty groups. (See page 951)

## Visual impairment due to ROP and concomitant disabilities

van Sorge *et al* determined the incidence of visual impairment caused by retinopathy of prematurity (ROP) and concomitant disabilities in 42 preterm neonates born in the Netherlands (2000–2009). Data were retrieved from the Dutch institutes for the visually impaired and compared with previous Dutch studies (1975–987, 1986–1994 and 1994–2000). They observed a gradual decrease of gestational age and birthweight but an increase of duration of artificial ventilation, supplemental oxygen administration, bronchopulmonary dysplasia, developmental delay, and behavioural abnormalities. Compared with the previous study (1994–2000) significantly fewer children were visually impaired due to ROP but the incidence of concomitant disabilities did not change. (See page 937)

## A novel paediatric game-based visual-fields assessor

Aslam *et al* describe the development and assessment of a novel computer-game apparatus (interactive model-castle structure) to measure visual fields in 19 children (4–14 years). Sixteen out of 18 clinically normal patients showed normal fields. For the five eyes with expected glaucomatous loss, all visual fields showed abnormal fields consistent with their medical condition. The authors conclude that it is feasible to use a computer game-based system to measure fields in children in a non-invasive, affordable and entertaining way. (See page 922)