Highlights from this issue

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Iris recognition camera for quantification of corneal opacification

Clinical evaluation by slit lamp is very subjective and techniques based on colour photography are difficult to standardise. Aslam *et al* present evidence for the utility of dedicated image analysis algorithms applied to images obtained by a highly sophisticated iris recognition camera that is small, manoeuvrable and adapted to achieve rapid, reliable and standardised objective imaging in a wide variety of patients while minimising artefactual interference in image quality. ***(see page 1466)***

Four years of intravitreal ranibizumab for neovascular AMD

Pushpoth *et al* analysed the benefit of intravitreal ranibizumab for 1017 patients (1086 eyes) with neovascular AMD. Numbers of patients remaining under follow-up were 88%, 72%, 65% and 51% at 12 months, 24 months, 36 months, and 48 months, respectively. The main reasons for absence of follow-up were the consequences old age or transfer of care. 83% and 65% of patients needed treatment in the third and fourth year. Assistance to patients in achieving long-term care is required. ***(see page 1469)***

Effectiveness of glaucoma medication

Rotchford and King assessed short-term repeatability of the effect of intraocular pressure (IOP) reducing medication and the number of measurements necessary to estimate therapeutic effect. IOP was measured at 8:00, 11:00 and 16:00 h at each of three weekly visits in untreated patients with primary open-angle glaucoma or ocular hypertension. After starting travaprost (0.004%) to both eyes, the measurements were repeated for a further three weekly visits. Mean reduction in IOP was 7.5 mm Hg (30%). Coefficient of repeatability and coefficient of variability were 7.8 mm Hg and 37.2%, respectively. Repeated estimates of the effectiveness of treatment in the same subject at the same time of day would be expected to lie within a range of 7.8 mm Hg and within ±73.2% of the mean effect with 95% confidence. A reduction in IOP less than 7.8 mm Hg over a single pair of measurements would be indistinguishable from measurement error. Precision improved from ±73.2% for a single pair of readings to ±25.9% for eight pairs. The authors conclude that usual clinical estimation of glaucoma medication effectiveness by measuring IOP is imprecise. ***(see page 1494)***

Prevalence And predictors of Sjögren's syndrome in patients with dry eye

Liew *et al* assessed the prevalence and predictors of Sjögren's syndrome (SS) in 327 patients with clinically significant aqueous-deficient dry eye. Review of systems questionnaire, medical history, dry eye questionnaire and laboratory work-up (Sjögren-specific antibody A (SSA), Sjögren-specific antibody B, rheumatoid factor and antinuclear antibody) were obtained. 38 (12%) had SS: 21 (6%) with primary SS and 5%) with secondary SS. Patients with SS had significantly worse conjunctival and corneal staining, Schirmer test (with and without anaesthesia), and symptoms compared with patients without SS. ***(see page 1498)***

Intravitreal injections: is there benefit for a theatre setting?

Abell *et al* compared the rate of endophthalmitis after intravitreal injections performed in an in-office (dedicated procedure room) versus in-theatre setting. In a retrospective comparative cohort study of 12 249 injections performed over a 6-year period, 3376 were performed in the in-office procedure room, compared with 8873 in the operating theatre. There were four cases of infective endophthalmitis (office group) compared with none in theatre group (p=0.006). In-theatre intravitreal injections were associated with a 13-fold lower risk of endophthalmitis compared to in-office injections. ***(see page 1474)***

Histopathological examination in deep anterior lamellar keratoplasty (DALK)

Ting *et al* retrospectively examined 225 DALK corneal buttons. Overall, 58% of the buttons were affected by corneal emphysema related to intrastromal air injection (the 'big bubble' technique), 5% by epithelial oedema related to the hydrodelamination procedure, which mimicked bullous keratopathy, and 1% of specimens were lost. Histopathological characteristic features of keratoconus could not be identified in in 10 (7.4%) of the DALK keratoconus cases. ***(see page 1510)***

Decreased retinal sensitivity after ILM peeling for macular hole surgery

Tadayoni *et al* compared the retinal sensitivity and frequency of microscotomas by spectral domain optical coherence tomography (SD-OCT) combined with scanning laser ophthalmoscopy microperimetry after idiopathic macular hole closure (with (8 eyes) or without (8 eyes) ILM peeling). Mean retinal sensitivity (in dB) was lower after peeling: 9.8±2.4 dB with peeling versus 13.2±2.9 without (p=0.0209). Postoperative microscotomas were significantly more frequent after ILM peeling.

The authors recommend avoiding ILM peeling when its potential benefit seems minor or unproven. ***(see page 1513)***

Intravitreal injection of gold nanorods

Sandrian *et al* evaluated the utility of gold nanorods (AuNRs) as an OCT contrast agent. Mice were intravitreally injected with sterile AuNRs coated with either poly(strenesulfate) (PSSAuNRs) or anti-CD90.2 antibodies (Ab-AuNRs), and imaged using OCT. After 24 h, eyes were processed for transmission electron microscopy or rendered into single cell suspensions for flow cytometric analysis. PSS-AuNRs and Ab-AuNRs were visualised by OCT in the vitreous, 30 min and 24 h post-injection. At 24 h, a statistically significant increase in leukocytes (primarily neutrophils) was observed in eyes that received AuNR, limiting their use as a contrast agent. ***(see page 1522)***