

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 travoprost (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 $\pm 73.2\%$ 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 $\pm 73.2\%$ for a single pair of readings to $\pm 25.9\%$ 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 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(styrenesulfate) (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)