At a glance

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

Asymptomatic retinal detachment in myopes

In a retrospective study of myopes who underwent ophthalmic evaluation prior to excimer laser procedures, patients diagnosed as having asymptomatic retinal detachment (ARD) were identified. Orucov et al collected data on 6547 myopes (12 815 eyes) with the mean preoperative spheric equivalence of -4.42. Five eyes (0.04%) of four patients had clinical ARD. Three eyes underwent successful scleral buckling procedure while two patients were lost to follow-up. The authors conclude that only a minority of myopes have ARD that are diagnosed during routine ophthalmoscopy prior to a refractive procedure. See page 1374

Corneal recovery after LASIK

In order to quantify human corneal recovery after moderate to high myopic LASIK, Moilanen et al studied 15 eyes (15 patients) preoperatively and postoperatively up to 2 years using in vivo tandem scanning confocal microscope. At the end of the follow-up, the total corneal thickness remained unaltered but epithelial hyperplasia was present. Keratocyte density in the anterior stroma showed a slight decrease during the follow-up but the subbasal nerve density recovered only 64% from the preoperative values. These observations suggest that the corneal remodelling continues for at least 2 years following LASIK. See page 1397

Environmental tobacco smoke exposure and eye disease

Lois et al undertook a systematic review of the literature (1950–2007) on the effect of environmental tobacco smoke (ETS) and eye disease. Only 7 studies could be identified that evaluated the possible relationship between ETS and an eye disease (refractive errors in children (n=2), cataract (n=1), age-related macular degeneration (n=3) and Grave ophthalmopathy (n=1)). Within each study, available data were insufficient to establish conclusive relationships between ETS and the eye disease. Additional studies addressing the effect of smoking on eye diseases are needed. See page 1304

Subretinal visual prosthesis with external connections

Due to low energy levels in microphoto-diode-based subretinal visual prostheses an external power supply is necessary. Besch *et al* connected subretinal prosthesis to an extracorporeal connector in the retro-auricular space via a trans-scleral, transchoroidal cable in 7 volunteers with retinitis pigmentosa. The cable was implanted subperiostally beneath the temporal muscle with three tension relief points. All implantations and explantations could be performed without complications throughout the study duration of 4 weeks. *See page 1361*

Topical ciclosporin in high-risk keratoplasty

Ünal and Yücel conducted a randomised prospective study in 47 high-risk keratoplasties based on the postoperative immunosuppression. 25 eyes (group 1) were treated with 0.05% ciclosporin and dexamethasone 0.1% and 22 eyes (group 2) were treated with dexamethasone only. Rejection-free graft survival rate was 60.8% in group 1 and 54.5% in group 2 (Kaplan-Meier logrank test, p = 0.474) with the average follow-up of 20.2 months and 18.5 months respectively. The authors conclude that topical 0.05% ciclosporin combined with dexamethasone was equivalent to dexamethasone alone in preventing graft rejection in a high-risk keratoplasty. See page 1411

Reduced fluence versus standard PDT in combination with IVTA

Sacu et al compared early treatment effect (12 weeks) of reduced fluence (rPDT) versus standard photodynamic therapy (sPDT) in combination with intravitreal triamcinolone (IVTA) in neovascular AMD. 40 patients received either sPDT (group A, n=20) or rPDT (group B, n=20) each followed by same-day 4 mg IVTA. Baseline characteristics were well balanced in both groups. At week 12, patients in group A had a mean loss of 23.7 letters compared with a gain of 3.4 letters in group B (p=0.04). Both treatment groups showed a similar course regarding central retinal thickness as well

as macular sensitivity. Choroidal hypoperfusion in the area of treatment was observed less frequently in group B than in group A (70% and 15% respectively; p=0.001). Repeat treatment was indicated in 70% of group A and 55% of group B (p=0.55). Although the rPDT-IVTA group showed a significantly better visual outcome than sPDT-IVTA at week 12, long-term studies are needed to confirm these benefits. See page 1347

Delayed suprachoroidal haemorrhage following glaucoma surgery

In a retrospective case-control study of 2752 glaucoma surgeries performed over a 10-year period, 29 cases of delayed suprachoroidal haemorrhage (DSCH) (1%) were identified by Swetha et al. An increased incidence of DSCH was observed after drainage device implantation compared with trabeculectomy (p<0.0001; OR 3.4). Statistically significant risk factors for DSCH included low postoperative IOP, aphakia, prior intraocular surgery, hypertension, anticoagulation, ischaemic heart disease, and respiratory disease. The visual outcome of patients with DSCH was significantly worse when compared with the controls. Caution should be exercised when operating on patients with known ocular and systemic risk factors. See page 1393

Localisation of intravitreally injected bevacizumab

Julien et al investigated the penetration and time-related distribution of bevacizumab in the macula, optic nerve, and the retinal veins after intravitreal injection of 1.25 mg bevacizumab into 4 Cynomolgus monkeys. The eyes were enucleated on days 1, 4, 7 and 14 for immunohistochemistry using anti-human Cy3-IgG. Bevacizumab penetrated rapidly into the macula, the retinal veins and the optic nerve after intravitreal injection and accumulated preferentially and specifically on the vessel walls and photoreceptors localised in the fovea within 1 day after injection. These findings support clinically observed rapid effects of bevacizumab in the treatment of retinal vein occlusion and macular oedema. See page 1424