At a glance

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Soft drusen remodelling

Smith *et al* quantified the dynamic remodelling process of soft drusen resorption and new drusen formation in 20 patients with AMD. Each eye was imaged at baseline and at a mean interval of 2 years and images were precisely registered by an automated technique. The drusen were classified into three groups: new drusen (only in the final image), resorbed drusen (only in initial image), and stable drusen (present in both images). Absolute change in drusen as well as dynamic drusen activity was measured. Dynamic remodelling processes of drusen resorption and new drusen formation as distinct disease activities that can occur simultaneously that are not captured by change in total drusen load were observed. Dynamic changes may be a useful marker of disease activity. ***See page 1618***

Assessing chloroquine toxicity with RNFL thickness, mERG, and visual field

Xiaoyun *et al* assessed chloroquine (CQ) toxicity by visual field testing (Humphrey 10-2 testing strategy), multifocal electroretinography (mfERG) and RNFL thickness (GDxVCC) in 60 patients with rheumatoid arthritis (RA) on treatment with CQ but with normal fundus appearance and controls (30 RA patients not receiving CQ and 100 normal subjects). A correlation between cumulative dose of CQ and mfERG N1 response of ring 2 and RNFL loss was observed. The authors conclude that scanning laser polarimetry and mfERG are useful tools for early detection of CQ retinopathy. ***See page 1632***

Causes of decreased visual acuity in Singaporean Chinese preschoolers

Dirani *et al* report the prevalence and causes of decreased visual acuity (worse than 20/50; 0.4 logMAR)) assessed in a population-based survey of 1684 Singaporean Chinese children aged 6–72 months. Participants underwent an orthoptic evaluation, cycloplegic refraction, and biometric measurements. The prevalence of decreased VA in children aged 30–47 months (2.1%) was comparable to that in children 48–72 months (2.05%) with no significant difference between boys and girls. The most frequent cause of decreased presenting VA was uncorrected refractive error in both age groups (64% and 71% respectively). ***See page 1561***

Pegaptanib as maintenance therapy in neovascular AMD: the LEVEL study

Friberg *et al* assessed the efficacy of pegaptanib as maintenance therapy in NV-AMD patients after induction therapy in a phase IV, prospective, open-label, uncontrolled exploratory study of 568 subjects with subfoveal NV-AMD, who had had one to three induction treatments 3–120 days before entry and showed initial improvement. Intravitreal pegaptanib 0.3 mg was administered as maintenance every 6 weeks for 48 weeks with follow-up to week 54. Discretionary additional unscheduled treatment was allowed for clinical deterioration. Mean VA improvement during induction (49.6 to 65.5 letters) was well preserved (54-week mean 61.8 letters). Mean CPT was relatively stable during maintenance. 50% patients received unscheduled booster treatment. The authors conclude that induction-maintenance strategy, using non-selective then selective VEGF inhibitors, could be considered for management of NV-AMD. ***See page 1611***

Dendritic cells in allergic conjunctiva

Dendritic cells (DCs) are the most potent antigen-presenting cells in initiating the immune response. Manzouri *et al* examined the degree of DC maturity associated with vernal keratoconjunctivitis (VKC) by flow cytometry to identify the cell surface expression (CD83, CD86, and major histocompatibility complex class II) and mixed leucocyte reactions to assess DC induction of T cell proliferation. As compared to normal controls, DCs derived from VKC patients were of a more mature phenotype and had reduced capability for induction of T cell proliferation. These observations offer an explanation for recognised susceptibility of VKC patients to viral infections. ***See page 1662***

Conjunctiva in micro shunt implantation for glaucoma

Mastropasqua *et al* describe the conjunctival epithelial features with in vivo confocal microscopy (IVCM; HRT II Rostock Cornea Module) in 14 eyes that underwent gold microshunt (GMS) implantation for uncontrolled glaucoma. Conjunctival mean microcyst density (MMD: cysts/mm^2) and mean microcyst area (MMA: mm^2) were measured. When comparing successful with failed implantation, the IVCM analysis showed a greater MMD and MMA. Clinical evidence of filtering bleb was not found in any of the patients. The authors conclude that enhancement of the aqueous filtration across the sclera may be one of the possible outflow pathways following GMS implantation. ***See page 1592***

Histamine-induced conjunctival oedema

Takahashi *et al* investigated kinetic changes in histamine induced bulbar oedema by intravenously injecting Evans blue dye into 14 male guinea pigs followed 30 min later by instillation of histamine eye-drops. One group of animals received levocabastine (antihistamine) eye-drops 10 min before histamine challenge. A digital camera was used to obtain images of the bulbar conjunctiva at 1 min intervals until 30 min after histamine challenge. The Image J software was used to analyse the images by counting the number of absolute pixel values. The conjunctivas were then harvested to measure the concentration of Evans blue. The degree of conjunctival oedema increased progressively until 20 min after histamine challenge and then stabilised. A significant correlation was observed between the pixel values of the conjunctival images and the concentration of Evans blue in the conjunctiva. ***See page 1657***