Highlights from this issue

doi:10.1136/bjophthalmol-2013-303349

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DETECTION OF GLAUCOMA PROGRESSION

Folio *et al* examined scanning laser polarimetry (SLP) population-derived versus individual-derived cut-off criteria for detecting progression in healthy (16 eyes), glaucoma suspect (34 eyes) and glaucoma subjects (26 eyes). All 48 subjects had reliable visual field (VF) and SLP scans acquired at the same visits. VF progression was defined by guided progression analysis (GPA) and by the VF index. SLP measurements were analysed by fast mode GPA, compared with the population rate of progression, and extended mode GPA, compared with the individual variability. There was poor agreement between VF and SLP progression regardless of the use of population derived or individual variability criteria.

EFFECTS OF PRETREATMENT WITH CHLORAMPHENICOL ON PSEUDOMONAS AERUGINOSA CONTACT LENS-ASSOCIATED KERATITIS

Bourkiza *et al* determined whether initial empiric treatment with chloramphenicol in culture proven Pseudomonas aeruginosa contact lens associated keratitis had an adverse effect on outcome. They retrospectively reviewed 139 cases and compared 46 (33%) cases that had used chloramphenicol (available without prescription) before fluoroquinolone, with patients who were treated only with a fluoroquinolone. The chloramphenicol group had worse initial acuity, more frequent complications, and longer interval to resolution (37 vs 21 days). However, the final acuity was similar in both groups.

SUNLIGHT EXPOSURE AND AMD

Sui *et al* systematically reviewed the epidemiological literature concerning the association between AMD and sunlight exposure and performed random-effects meta-analysis, followed by subgroup analysis and sensitivity analysis, including a random-effects meta-regression for study-specific covariates. Of the 14 studies, 12 studies identified an increasing risk of AMD with greater sunlight exposure, six of which reported significant risks. The pooled OR was 1.379 (95% CI 1.091 to 1.745). The subgroup of non-population-based studies also revealed a significant risk (OR 2.018). The OR significantly decreased with increasing GDP per capita.

ADALIMUMAB THERAPY FOR REFRACTORY UVEITIS

Suhler *et al* conducted a prospective, multicentre, open-label Phase II clinical trial to assess the effectiveness and safety of adalimumab, a fully human anti-TNF monoclonal antibody, in treating refractory uveitis. Twenty-one of 31 patients (68%) were characterised as clinical responders at 10 weeks, of whom 12 patients (39%) exhibited durable response after 1 year. The most common reason for study termination was primary or secondary inefficacy. Treatment-limiting toxicity was not identified in any patient. Additional studies are required to determine the place of adalimumab and other TNF blockers in the treatment of uveitis.

OCULAR ABNORMALITIES IN DOWN SYNDROME

Fong *et al* conducted a cross-sectional survey to determine the prevalence of visual impairment and eye diseases among 91 adults with Down syndrome in Hong Kong. They observed that 57% of the patients had normal vision to mild vision impairment and 2% were blind. Significant refractive errors were found in 86% of the eyes (myopia (59%) and astigmatism (73%)). Infective keratitis (0.5%), keratoconus (0.5%) and Brushfield spots (1%) were uncommon. Cataracts (72%) and fundus abnormalities were common (50%). Vision in thee patients can be improved through the use of glasses and treatment of cataracts.

INFLUENCE OF GAMMA-KNIFE RADIOSURGERY ON OCULAR SURFACE

Horwath-Winter *et al* evaluated effects of Leksell Gamma Knife radiosurgery (median dose 30 Gy (range 25–35 Gy) delivered in a single fraction) on ocular surface and tear function in 36 patients with choroidal melanoma. Three months after radiosurgery, the subjective dry eye symptom score and lissamine green staining score of the ocular surface were significantly higher in the treated eyes compared with the fellow eyes. After 24 months, Schirmer test values were significantly reduced in the treated eyes. The radiation dose to the lacrimal gland was correlated with ocular surface changes.

POSTINTRAVITREAL INJECTION ENDOPHTHALMITIS RATES

Englander *et al* retrospectively reviewed all consecutive eyes after intravitreal injections performed at the Massachusetts Eye and Ear Infirmary over a period of 5-years. After 10 208 intravitreal injections, the incidence rate of endophthalmitis was 0.029% per injection (3 of 10 208 injections). On average, endophthalmitis occurred after seven injections. Bacterial cultures revealed coagulase-negative Staphylococcus species (1), Staphylococcus epidermidis (1), and negative culture (1). All cases were successfully treated using either intravitreal antibiotics and steroids or pars plana vitrectomy. Further studies are required to assess aseptic techniques to prevent this rare complication.

PLASMA LEVELS OF VEGF BEFORE AND AFTER ANTIVEGF INTRAVITREAL INJECTION

Zehetner *et al* determined the level of vascular endothelial growth factor (VEGF) in the plasma of 60 patients with diabetic macular oedema (DME, 30 patients) and neovascular AMD (30 patients) before and after randomly assigned intravitreal injection of bevacizumab (1.25 mg), ranibizumab (0.5 mg) or pegaptanib (0.3 mg).

The concentration of VEGF were measured by ELISA just before the injection, after 7 days and 1 month. Bevacizumab significantly reduced the level of VEGF in the plasma for up to 1 month. No significant changes in plasma levels of VEGF following intravitreal ranibizumab or pegaptanib were observed. The clinical impact of these findings remains to be assessed.