Highlights from this issue

doi:10.1136/bjophthalmol-2014-305599

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Wykoff and colleagues determined whether 2.0 mg intravitreal aflibercept as therapy for exudative age-related macular degeneration could maintain or even improve upon the visual acuity and anatomic gains of the Super-dose Anti-VEGF (SAVE) Trial in patients who had received 2.0 mg intravitreal ranibizumab for recalcitrant exudative age-related macular degeneration.[1] The study included 46 patients with a mean of 42 prior intravitreal treatments. At 6 months after baseline, BCVA had not changed significantly ($P=0.71$), while central subfield thickness had improved significantly. At 6 months after baseline, ten of 45 (22%) patients had no retinal fluid and no patient lost >15 letters. The authors conclude that aflibercept 2.0 mg treatment maintained the improvements in visual acuity previously achieved with high-dose 2.0-mg ranibizumab injections in patients with recalcitrant wet age-related macular degeneration.

In a retrospective clinical-histopathological case series study, Rootman and colleagues examined the clinical, imaging, histologic and flow dynamic characteristics of orbital cavernous haemangioma.[2] They found and concluded that cavernous haemangioma demonstrate clinical features and growth characteristics of a benign mass. Dynamic imaging highlights their slow flow vascular nature, while histology demonstrates hypercellularity and stromal changes which may be due to thrombosis and recanalisation in organised lesions.

Iverson and colleagues examined the frequency of abnormal retinal nerve fibre layer thickness and ganglion cell complex measurements among healthy and glaucoma suspect and preperimetric glaucoma eyes in a prospective longitudinal study.[3] Using spectral-domain optical coherence tomography, retinal nerve fibre layer thickness and ganglion cell complex parameters were measured annually. The authors found that during serial follow-up, 100% and 91% of normal eyes had all measured parameters within the normal limits indicating a high specificity of the method. About one third of the glaucoma suspect or glaucoma preperimetric eyes showed measurements out of the normal range. A high percentage of them, however, were not replicated on subsequent tests. The authors concluded that confirmation of suspected measurements of the retinal nerve fibre layer and ganglion cell layer complex are recommended to differentiate reproducible loss from long-term variability.

The use of intraoperative online optical coherence tomography for improving deep anterior lamellar Keratoplasty (DALK) surgery was described by Steven *et al*.[4] The retrospective case series included 6 patients with keratokonus, corneal dystrophy or herpetic stromal scars. The authors found that intraoperative online optical coherence tomography enabled real-time visualisation of all surgical steps of the DALK procedure, including the placement of an air bubble above Descemet's membrane and the presence of bare Descemet's membrane and potential interface fluid. The authors concluded that intraoperative online optical coherence tomography is helpful for the procedure.

Eriksson and colleagues validated the newly developed WINROP (weight (W), insulin-like growth factor 1 (I), neonatal (N), retinopathy of prematurity (ROP)) algorithm aimed at detecting retinopathy of prematurity (ROP) requiring treatment at an early stage.[5] The study included 104 children with a mean gestational age at birth of 28.7 weeks (range, 23.6–32.1 weeks) and a mean birth weight of 1208 g (range, 477–2340 g). Weekly weight measurements were used in WINROP to calculate the risk of developing ROP. Out of the whole study population, 16 (15%) children developed mild ROP (stage 1 or 2), 5 (5%) children severe ROP, and 2 (2%) were treated for ROP. The authors found that WINROP identified all infants at risk for developing stage 3 ROP (100% sensitivity), while the specificity was 59%.

Chiam *et al* examined the reduction of choroidal melanoma thickness at 6 months after ruthenium 106-brachytherapy in dependence of the chromosome 3 status.[6] The latter generally correlates strongly with metastatic death. The diagnosis was substantiated by transscleral fine needle aspiration biopsy or by transretinal biopsy with a 25-gauge vitreous cutter. The chromosome 3 status was determined by fluorescence in situ hybridisation from 2002 until 2006, and by either multiplex ligation-dependent probe amplification and/or microsatellite analysis after this period until the end of the study. The study included 149 patients and the median follow-up duration medians were 6.3 months for disomy 3 and 6.4 months for monosomy 3 tumours. The rates of thickness reduction (6.7% and 7.0% per month, respectively) did not significantly correlate with chromosome 3 loss. It suggested that tumour thickness reduction at 6 months after treatment was unlikely to predict survival.

REFERENCES

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