

Highlights from this issue

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Primary open-angle glaucoma and WDR36 sequence variance

Frezzotti *et al* assessed the involvement of WDR36 sequence variance in 34 Italian families affected by primary open-angle glaucoma (POAG). Twenty-five families were affected by high-tension glaucoma (HTG), four by juvenile glaucoma and one by normal tension glaucoma. Five intronic polymorphisms (IVS5+30C/T; IVS12+90 G/T; IVS13+89G/A; IVS16-30A/G; IVS21-75G/A) were identified. In addition, one proband was found to carry the p.D658G mutation. These findings suggest that the WDR36 sequence variance is only rarely observed. Extensive studies are needed to identify the role of genetic factors in the pathophysiology of glaucoma. (*See page 624*)

Pulse wave velocity in healthy retinal arteries

Kotliar *et al* analysed time-dependent alterations in retinal vessel diameter by the dynamic vessel analyser in a randomly chosen eye of 10 young (median age 26.0 years) and 10 old (median age 67.0 years) healthy volunteers. Two segments of a retinal artery were measured simultaneously and data analysed to measure retinal artery pulse wave velocity (rPWV). Significant differences in rPWV were observed between young (median 21.5 mm/s) and old (median 243.8 mm/s) volunteers. Additional studies are necessary to assess whether rPWV is a marker of cerebrovascular disease. (*See page 675*)

Reproducibility of peripapillary retinal nerve fibre layer thickness

Mansoori *et al* determined the reproducibility of peripapillary retinal nerve fibre layer thickness (RNFLT) measurements by Spectral OCT/SLO in 61 normal subjects and 41 glaucoma patients. Each eye had three RNFLT measurements in one eye (1 h apart). The series was repeated on three different days within 1-month period. The intrasession intraclass coefficient correlations for mean RNFLT in normal and glaucomatous eyes were 0.994 and 0.998, respectively. The intersession intraclass coefficient correlation for mean

RNFLT in normal and glaucomatous eyes was 0.988, indicating reproducible measurements of peripapillary RNFLT in both groups. (*See page 685*)

Young age as a risk factor in intermediate uveitis

Ayuso *et al* retrospectively evaluated 35 patients with intermediate uveitis diagnosed in childhood (≤ 16 years old). Visual outcomes and development of complications were analysed in relation to age of onset and ocular signs at presentation. Forty-six per cent of patients had onset at age ≤ 7 years. The younger-onset group had worse best corrected visual acuity (at presentation and at 3 years), reached remission less frequently and needed longer treatment. The authors recommend intensive monitoring and lower threshold for systemic treatment in these patients. (*See page 646*)

Impact of age-related macular degeneration on vision-specific functioning

Lamoureux *et al* assessed the impact of early and late age-related macular degeneration (AMD) on vision-specific functioning in Singapore Malays using a validated modified VF-11 scale. In multivariate models, after adjusting for age, sex, education, level of income, smoking status, ocular condition and hypertension, only late AMD was independently associated with poorer vision functioning compared with absence of AMD or early AMD. (*See page 666*)

Imatinib mesylate and adalimumab for Graves' ophthalmopathy

van Steensel *et al* tested the efficacy of imatinib mesylate (tyrosine kinase inhibitor) and adalimumab (anti-tumour necrosis factor (TNF)- α antibody) for the treatment of Graves' ophthalmopathy in a whole orbital tissue culture system derived from 10 patients. Imatinib mesylate significantly reduced interleukin (IL)-6 and hyaluronan production, exhibiting

positive correlation with platelet-derived growth factor (PDGF)-B mRNA level. Adalimumab also significantly reduced IL-6 production, correlating positively with TNF- α mRNA level. The authors conclude that imatinib mesylate and adalimumab can be expected to reduce inflammation and tissue remodelling in patients with Graves' ophthalmopathy. (*See page 735*)

Wireless ocular telemetry sensor for continuous intraocular pressure monitoring

Mansouri and Shaarawy report their initial clinical results with a novel wireless ocular telemetry sensor (OTS) for continuous intraocular pressure (IOP) monitoring. A signal was recorded in all 15 patients. Thirteen (87%) patients completed 24-h IOP monitoring, one patient discontinued due to device intolerance, and incomplete recordings were obtained in another patient due to technical malfunction. No serious adverse events were observed. The highest signals were recorded during the nocturnal period in the majority of the patients (69%). This technology has the potential to provide hitherto unobtainable data on the chronobiology of IOP, possibly leading to the improved care of glaucoma patients. (*See page 627*)

Robot-assisted retinal vessel microcannulation

Ueta *et al* evaluated the performance of a new parallel robotic system in retinal vessel microcannulation (inner diameter 60–80 μ m) and endovascular injection of indocyanine green dye through a 20G pars plana scleral port in a harvested porcine eye animal model. Retinal vessel microcannulation and dye injection were achieved by the robotic system twice in four attempts, and manually either not at all or incompletely in all six attempts. Dye leakage was not observed with the robotic system. In contrast, dye leakage was always observed with manual microcannulation, indicating that robotic system was less invasive. (*See page 731*)