BJO at a glance

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KERATOCONUS: ASYMMETRIC DISEASE

Keratoconus is a non-inflammatory corneal ectasia with bilateral involvement in over 90% of patients. However, in a study of 83 patients diagnosed at presentation Burns and coworkers demonstrated there is significant asymmetry of disease both for corneal shape and visual acuity. Quantitative topographical indices reflected changes in corneal power which correlated best with the impaired visual acuity.

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BEHÇET'S DISEASE AND SERUM PARAOXONASE ACTIVITY

Behçet's disease is a multisystem disorder that is characterised by ocular and skin manifestations as well as genital and oral ulcers. Its aetiology and pathogenesis have yet to be clarified. In a study by Karakucuk and coworkers serum paraoxonase (PON) activity was found to be decreased in the active stage of Behçet's disease. The authors suggest that endothelial damage and increased PON leucocyte activity in the active stage of the disease may result in a pro-oxidation environment which in turn results in decreased antioxidant PON activity and increased lipid peroxidation.

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PDT AND WET AMD

Age related macular degeneration (AMD) is the main cause of blindness in the Western world in older patients. The effectiveness of photodynamic therapy (PDT) therapy in the treatment of wet AMD is still being evaluated. A study by Armbricht and coworkers of 48 patients with classic subfoveal choroidal neovascularisation suggests that at a 12 month follow up 71% of patients lost less than three line of best corrected distance visual acuity when treated with PDT. In other words at 1 year two thirds of treated patients were prevented from severe visual loss.

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NEW TREATMENT FOR SEVERE OCULAR SURFACE DISORDERS

Severe ocular surface damage caused by thermal and chemical burns or Stevens-Johnson syndrome represents a serious clinical challenge. Although corneal epithelial transplantation and cultivated corneal epithelial stem cell transplantation have been developed to improve outcome of ocular surface reconstruction significant problems remain. Nakamura and coworkers describe a new procedure for treating this problem. They used transplants of cultivated autologous oral epithelial cells in four patients with Stevens-Johnson syndrome or chemical burns. Initial results are promising although long term survival of these grafts has yet to be studied.

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IS SERIOUS HERPES SIMPLEX KERATITIS ON THE WANE?

Corneal scarring as a consequence of viral keratitis has declined as an indication for penetrating keratoplasty over the past five decades. Branco and coworkers have reviewed pathology records to determine the incidence of penetrating keratoplasty for herpes simplex keratitis from 1973 to 2001. They document a significant decline in the number of cases of herpes simplex virus keratitis that progresses to visually significant scarring. They postulate that this is the result of recent progress in medical management of herpes simplex viral keratitis.

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HOW COMMON IS THE CHARLES BONNET SYNDROME?

The Charles Bonnet syndrome is a condition in which patients experience complex formed visual hallucinations usually in the presence of significant visual loss. Recent studies suggest that this previously rarely described syndrome may be more common than is recognised. Tan and coworkers studied 1077 consecutive patients age 50 years or more from a comprehensive of ophthalmology clinic. In this report the prevalence of the Charles Bonnet syndrome in a group of Asian patients was 0.4%. This relatively low percentage of patients, however, should be seen in the context that they were in a comprehensive ophthalmology clinic. Studies from retinal clinics investigating patients with macular degeneration suggest that the Charles Bonnet syndrome is extremely common in this setting if not always readily admitted to by the patients.

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PREVENTING CORNEAL ALLOGRAFT REJECTION

Corneal transplantation is the most common form of solid tissue transplantation in humans. It is characterised by an unusually high survival rate. However, high risk patients have a very poor success rate of corneal graft survival and several experimental techniques are being investigated to suppress the immunologically mediated rejection phenomena. Vitová and coworkers studied corneal graft recipients in a mouse model. In this study, treating high risk recipients with small mAb anti-CD4 proved to be more effective in preventing corneal allograft rejection than treatment with mAb anti-CD8 or the immunosuppressive drugs MMF and CsA. This is in keeping with recent observations that CD8⁺ T cells do not have a significant role in corneal graft rejection.

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