Superior Movement with Myoconjunctival Enucleation, PMMA Implant

In a randomized, controlled, observer-masked intervention trial, Shome et al (p. 1638) demonstrated that myoconjunctival enucleation with a polymethyl methacrylate (PMMA) implant provides clinically and statistically significant better implant and prosthesis movement than the traditional PMMA implant, and better prosthesis movement than the porous polyethylene implant. The investigators randomized 150 patients to 3 equal groups: Group 1 received a traditional PMMA implant following enucleation with muscle imbrication; Group 2 received a PMMA implant following enucleation with myoconjunctival technique; and Group 3 received a porous polyethylene implant following enucleation by the scleral cap technique. They found the movement of the myoconjunctival PMMA implant was better than the traditional PMMA implant but similar to the porous polyethylene implant. In addition, the prosthesis movement with the myoconjunctival PMMA implant was better than both the traditional PMMA and porous polyethylene implants. They recommend using PMMA implant with myoconjunctival enucleation since the PMMA implant is relatively inexpensive and the myoconjunctival enucleation is not easy to learn and time-efficient.

Intravitreal Adalimumab Ineffective in Chronic Uveitic Macular Edema

Androudi et al (p. 1612) have found that intravitreal adalimumab is not efficacious in improving best corrected visual acuity (BCVA) or reducing central retinal thickness (CRT) in patients with refractory uveitis-related macular edema. Adalimumab is the third tumor necrosis factor inhibitor, after infliximab and etanercept, to be approved by the U.S. Food and Drug Administration. It is currently on-label to treat rheumatoid arthritis, psoriatic arthritis, ankylosing spondylitis, Crohn’s disease, moderate to severe chronic psoriasis and juvenile idiopathic arthritis. In this off-label prospective, noncomparative intervention case series, intravitreal adalimumab injections were administered monthly for 3 months to 8 patients with controlled uveitis and chronic, refractory cystoid macular edema (CME). While no significant ocular or systemic side effects were observed, no improvement in BCVA or reduction in CRT was noted either. Although this study was limited by a small sample size and lack of a control group, the results suggest intravitreal adalimumab may not be a viable option for patients with chronic, refractory uveitic CME.

C-Reactive Protein, Genotypes Independently Associated with AMD Risk

Age-related macular degeneration (AMD) has been linked to genetic variants CFHY402H and LOC387715 A69S ARMS2 as well as high sensitivity C-reactive protein (CRP) levels. A study by Seddon et al (p. 1560) suggests high sensitivity CRP and the CFHY402H and LOC ARMS2 genotypes are independently associated with the risk of AMD—implying that both a biologic serum marker of inflammation, as well as genetic factors in the inflammatory pathway (CFH) and possibly another pathway (LOC) are related to AMD. Controlling for genotype and demographic and behavioral risk factors in 244 patients with AMD and 209 individuals with no or minimal maculopathy, higher CRP levels were associated with a higher risk of AMD. In addition, the presence of both higher CRP levels combined with risk genotypes for each gene separately or combined constituted the higher risk of AMD. The authors conclude while genetic factors strongly predispose individuals to AMD, environmental and biologic factors—as well as factors leading to higher CRP—can modify genetic susceptibility to AMD.

Decision Trees Based on Visual Acuity for Cataract Surgery Patients

In the quest to determine guidelines concerning the appropriateness of cataract extraction, Quintana et al (p. 1471) developed decision trees based on visual acuity—a relevant outcome when evaluating the results of cataract extraction. To create these decision trees, the researchers randomly assigned 3691 patients to a derivation cohort and 2416 patients to a validation cohort. The investigators gathered clinical data including visual acuity and the Visual Function Index 14 questionnaire before and after cataract extraction. The decision trees developed from the derivation cohort were then validated in the validation cohort. For patients with simple cataract, pre-intervention visual acuity was a predictor of significant improvement in visual acuity; greater surgical complexity was a negative predictor. In patients with cataract and other ocular pathology, 2 additional variables—expected postoperative visual acuity and pre-intervention patient visual function—also predicted change in visual acuity. The authors conclude these decision trees represent a simple tool for physicians to use in their daily clinical practice when identifying appropriate patients for cataract extraction.

Long-Term Natural History of Myopic Maculopathy Progression Studied

Hayashi et al (p. 1595) conducted a retrospective study focusing on the long-term progression pattern of each type of fundus lesion found in eyes with myopic maculopathy. The researchers reviewed medical records of 806 eyes of 429 consecutive patients with high myopia (refractive error ≥−8.00 diopters or axial length ≥26.5 mm) followed for a mean of 12.5 years. They found that 40% of these eyes experienced progression during the follow-up period. Only 13.4% of eyes with a tessellated fundus showed a progression of myopic maculopathy, while 69.3% of eyes with lacquer cracks, 49.2% of eyes with diffuse atrophy, 70.3% of eyes with patchy atrophy, and 90.1% of eyes with choroidal neovascularization showed a progression of the myopic maculopathy. The authors observed a posterior staphyloma more frequently in eyes that demonstrated progression from tessellated fundus, diffuse atrophy, and patchy atrophy than those without progression, prompting them to recommend preventive therapy focusing on posterior staphyloma to prevent the visual impairment caused by progression of this condition.

Lori Baker Schena and John Kerrison, MD