

Autologous Retinal Transplant for Closure of Refractory Macular Holes

Grewal et al (p. 1399) conducted a multicenter, retrospective, consecutive case series to assess the utility and long-term outcomes of autologous neurosensory retinal transplant for closure of refractory large macular holes (MHs). Out of a total of 41 eyes of 41 patients, 36 eyes (87.8%) achieved complete anatomic closure of MH by OCT. Mean corrected visual acuity (VA) improved from 1.11 ± 0.66 to 1.03 ± 0.51 at the last postoperative visit. The VA improved in 15 eyes (36.6%), was stable in 17 eyes (41.5%), and worsened in 9 eyes (21.9%). Additionally, of 28 eyes that were highly myopic, 25 (89.3%) achieved anatomic closure. The researchers also reported improved restoration of ellipsoid zone and external limiting membrane defects on OCT. One case of retinal detachment and one case of vitreous hemorrhage were the major postoperative complications. The researchers conclude that autologous retinal transplant offers a high degree of anatomic success for closure of refractory MHs.

Assessing “Cell Therapy” Clinics Offering Treatment of Ocular Conditions

In a cross-sectional study, Nirwan et al (p. 1350) assessed the number and locations of “cell therapy” clinics offering treatments for ophthalmic diseases in the United States via online direct-to-consumer marketing. A systematic keyword-based Internet search and content analysis of company websites identified 40 companies with 76 clinics marketing “cell therapy” for ocular conditions as of September 16, 2017. California (23), Florida (12), and Illinois (10) contained the most clinics. The most commonly marketed ocular conditions were macular degeneration (35), optic neuritis (18), retinitis pigmentosa (17), and diabetic retinopathy (16). All 40 companies specified sources of cells, and the most common route of administration was intravenous (22). Numerous companies did not mention their route of administration on their website, while others listed more eye-specific routes. Only 4 companies listed their prices, which varied from \$4000 to \$10 500 for a single treatment. The authors conclude that “cell therapy” for ocular conditions is readily available via direct-to-consumer marketing and suggest the need to continue educating the public about the substantial potential risks associated with treatments at such clinics.

Exploring Associations between Optic Disc Measures and Obstructive Sleep Apnea

Lee et al (p. 1372) conducted a cross-sectional cohort study of 848 adults 19 to 22 years of age to explore associations between overnight polysomnography-derived measures of obstructive sleep apnea (OSA) and glaucomatous changes in young adults. The researchers found that the median apnea-hypopnea index (AHI) result across the study cohort was 2.2 events per hour. Based on the AHI results, 150 participants demonstrated mild OSA, 26 had

moderate OSA, and 2 had severe OSA. Peripapillary retinal nerve fiber layer (RNFL) thickness was reduced in young adults with OSA compared with those without OSA, but only at the inferotemporal and superotemporal segments. In addition, higher AHI results were associated with thinner RNFL superotemporally. The findings remained significant after adjusting for potential confounders, and optic disc measures did not differ significantly based on OSA severity. The researchers conclude that young adults with OSA may have preclinical thinning of the peripapillary RNFL compared with healthy controls.

Association between Glaucoma and Circadian Blood Pressure Variability

In an observational, cross-sectional study, Yoshikawa et al (p. 1366) set out to determine the relationship between glaucoma and circadian blood pressure (BP) variability, such as increased nighttime BP and absence of nocturnal BP dipping (called a “nondipper” pattern). The researchers assessed 109 glaucoma patients from the Longitudinal Study of Biological Circadian Rhythms in Glaucoma Patients: Home Testing of Circadian Intraocular Pressure and Biological Parameters (LIGHT) study and 708 healthy control participants without glaucoma from a community-based cohort. They found that nighttime systolic BP and the lowest systolic BP were significantly higher in the glaucoma group than in the control group. In addition, the prevalence and the odds ratio of the nondipper pattern were significantly higher in the glaucoma group than in the control group. The authors conclude that the presence of glaucoma was significantly associated with increased nighttime BP and the nondipper pattern of BP independent of potential confounders.

Applying the Cancer Genome Atlas Classification to Uveal Melanoma

Vichitvejpaisal et al (p. 1445) applied The Cancer Genome Atlas (TCGA) classification to uveal melanoma (UM) biopsied using fine-needle aspiration biopsy to determine the predictability for metastasis and death. In a retrospective cohort study, 658 patients with UM were categorized as TCGA class A, B, C, and D. The researchers found that more advanced tumor classification revealed older mean patient age, worse presenting visual acuity, greater distance from the optic disc, larger tumor basal diameter, and greater tumor thickness. More advanced TCGA class was also associated with increased risk of metastasis and death. The 5-year estimates of distant metastasis to any site in TCGA classes B, C, and D (compared with A) were elevated by 4-, 10-, and 30-fold, respectively. There were no deaths in class B, but the 5-year estimates for death resulting from classes C and D (compared with A) tumors were 3.1 and 13.7, respectively. The researchers conclude that using TCGA classification to group UM appears to reliably predict the risk of metastasis and death.

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