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EDITORIAL

2017 Issue 5 at a glance:

This issue of our journal features six original articles, one review, and five case reports representing the research being conducted by Turkish ophthalmologists in order to further global scientific knowledge.

Keratoconus is a corneal pathology characterized by progressive ectasia, generally exhibiting bilateral and asymmetrical involvement. Although the progressive disease course eventually affects both eyes, initially only one eye may be affected, or another possibility is that eyes with normal clinical findings and topographic patterns in fact have subclinical keratoconus. To investigate this possibility, Aksoy et al. compared quantitative topography indices (QTIs) and corneal higher-order aberration (HOA) data from the normal eyes of unilateral keratoconus patients to those of the fellow keratoconic eye and with the normal eyes of healthy individuals. They report that compared to healthy controls, the normal eyes of unilateral keratoconus patients had significantly higher QTI and HOA values except for spherical aberration. The authors concluded that these eyes may have an early form of the disease and that evaluating QTIs and HOA data together is more useful for diagnosing subclinical keratoconus (see pages 249-254).

The second article in this issue is also related to keratoconus and evaluates the disease from a different point of view, focusing on changes in endothelial cell count and morphology of the posterior surface. Previous studies have reported a tendency toward reduced endothelial cell density (ECD) and percentage of hexagonality with disease progression, but keratoconus stage has not been shown to significantly correlate with endothelial cell morphology or ECD changes. Believing that these conflicting findings may be a result of small numbers of keratoconus patients, Bozkurt et al. aimed to investigate changes in corneal endothelial cells in the different stages of keratoconus in a larger sample population. They determined that corneal endothelial cell count decreased with progression of keratoconus and emphasized that specular/confocal microscopic examination was required in eyes with advanced keratoconus (see pages 255-260).

Eser Öztürk et al. present a study in which they determine the prevalence of vitreomacular interface (VMI) pathologies and evaluate their association with clinical findings in patients with Behçet's uveitis. They retrospectively evaluated macular optical coherence tomography (OCT) images of 160 eyes of 96 patients diagnosed with Behçet's uveitis for VMI pathologies such as posterior vitreous detachment (PVD), epiretinal membrane (ERM), vitreomacular traction (VMT), vitreomacular adhesion (VMA), full-thickness macular hole (FTMH), lamellar macular hole (LMH), and pseudohole. They found that these conditions are common among uveitis patients and increase in frequency with longer duration of uveitis. They also report that OCT is more sensitive than fundus examination in the detection of VMI pathologies in uveitis patients (see pages 261-266).

In a study seeking to answer the question of whether all retinal nerve fiber layer (RNFL) defects are glaucomatous, Gür Güngör and Akman reassessed patients initially diagnosed with glaucoma based on RNFL damage detected on OCT and found that the ocular findings of some of those patients were actually due to different conditions such as ischemic optic neuropathy, optic neuritis associated with multiple sclerosis, optic disc drusen, and pseudotumor cerebri. The authors concluded that neuroophthalmologic diseases and optic disc anomalies could also cause RNFL thinning, and state that the differential diagnosis of glaucomatous and nonglaucomatous optic neuropathies should not depend only on OCT, but requires both RNFL measurements and disc topography parameters, as well as a thorough ophthalmic examination (see pages 267-273).

Akıncıoğlu et al. evaluated the efficacy and safety of an intravitreal dexamethasone implant (OZURDEX®, Allergan, Inc., Irvine, CA, USA) in the treatment of recalcitrant diabetic macular edema and reported that although the implants were fairly effective, they cannot be recommended instead of anti-VEGF agents as a first-line treatment due to steroid-related side effects (see pages 274-278).

In the final original research article of this issue, Nalcı et al. used both OCT angiography (OCTA) and spectral domain

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OCT (SD-OCT) to evaluate vascular changes in patients with idiopathic macular telangiectasia type 2 (MacTel 2). They report that OCTA provides data important both for understanding the pathogenesis of MacTel 2 and for patient follow-up, allowing clear observation of changes in the deep vascular plexus in early disease and choroidal neovascularization in later disease stages, unlike fundus fluorescein angiography. The authors also note that en face flow maps should be evaluated together with B-scan SD-OCT images to achieve optimal results in clinical practice (see pages 279-284).

Barut Selver et al. have reviewed the current topic of limbal stem cell failure and its treatment with stem cell transplantation. They report that blindness due to corneal vascularization and opacification arising from loss of limbal stem cell function from any primary or secondary cause accounts for about 10% of all blindness worldwide. The authors emphasize that the most effective treatment option for this pathology is to transplant tissue containing sufficient amounts of stem cells, leading to the development of various techniques to preserve and expand stem cells in culture. Of these techniques, they report that expansion of limbal biopsies as explant cultures on a biocompatible material (preferably human amniotic membrane) and the surgical transplantation of this tissue is the most successful and commonly used method (see pages 285-291).

In the first case report of this issue, Ecel et al. share the case of a 7-year-old girl who was diagnosed with asymptomatic nephropathic cystinosis when pathognomonic white crystals were detected in the cornea during a routine eye examination. Cystinosis is a metabolic disease that causes the accumulation of cystine crystals throughout the body and most commonly affects the eyes and kidneys. The authors point out that asymptomatic cystinosis can be diagnosed by anterior segment examination, especially during routine eye examination, and emphasize the important responsibility ophthalmologists have in preventing future kidney failure by enabling early treatment with cysteamine (see pages 292-295).

Swimming goggles and diving masks are necessary to resolve the refraction problem between the eye/water interface so that we can see clearly underwater. Ergözen describes a patient with subconjunctival hemorrhage associated with ocular barotrauma resulting from the use of swimming goggles during breath-hold diving, and presents preventative measures that can be taken to avoid this traumatic side effect of pressure changes while diving (see pages 296-297).

Dikkaya et al. present the fluorescein angiography, fundus autofluorescence, OCT, and electrophysiological test results in a rare case of posterior polar choroidal dystrophy. Fundus examination revealed bilateral atrophy of the retinal pigment epithelium and choriocapillaris between the vascular arcades and surrounding the optic disc, which appeared as hypoautofluorescence on fundus autofluorescence imaging. Atrophy of the choriocapillaris and outer retinal layers were evident on OCT, photopic and scotopic responses were attenuated on flash electroretinography (ERG), and responses were also minimal in pattern and multifocal ERG (see pages 298-301).

Doğuizi et al. evaluated the SD-OCT findings of three cases of X-linked juvenile retinoschisis (XLRS). XLRS is an retinal dystrophy characterized by splitting of the neurosensory retinal layers and X-linked recessive inheritance. The authors discussed the common bicycle spoke wheel appearance of the macula on fundus examination and typical SD-OCT findings of retinal splitting, emphasizing that this makes SD-OCT an important imaging method that provides more detailed information about XLRS (see pages 302-305).

In the final case report, Batıoğlu et al. present a case of bilateral isolated foveal hypoplasia in which multimodal imaging techniques were used to confirm the diagnosis. In this report, the authors indicate that clinical diagnosis of foveal hypoplasia may be difficult due to the subtle nature of fundus findings, while SD-OCT reveals loss of the foveal depression and continuity of the inner retinal layers at the fovea. They also emphasized that fundus autofluorescence imaging has emerged as an auxiliary diagnostic technique by showing loss of foveal hypoautofluorescence in the presumed foveal area (see pages 306-308).

Respectfully on behalf of the Editorial Board,

Tomris Şengör, MD