

## EDITORIAL

### 2020 Issue 5 at a Glance;

This issue of our journal begins with a eulogy written by Turkish Ophthalmology Association president Professor İzzet Can, MD in memory of Professor M. Erol Turaçlı, MD, the doyen of our professional community who we lost due to COVID-19. This is followed by 6 original research articles, 1 review, and 5 case reports.

Infectious keratitis is a condition characterized by uncontrolled inflammation associated with the proliferation of bacteria, viruses, fungi, or parasites in the cornea due to impaired defense mechanisms for various reasons. Bacterial keratitis can result in severe vision loss and therefore, empirical antibiotherapy should be initiated early, without waiting for culture and smear results. Dikmetaş et al. retrospectively evaluated the medical records of 31 patients who were hospitalized and treated for bacterial keratitis. Of these, 20 patients (64.5%) received fortified cephalosporin (50 mg/mL cefazolin) and aminoglycoside (14 mg/mL gentamicin) combination therapy after nonresponse to initial treatment with fourth-generation fluoroquinolone (5 mg/mL moxifloxacin), while 11 patients (35.5%) received fortified therapy as first-line treatment. Superficial lesions showed faster response to treatment ( $p=0.037$ ) and moderate correlations were observed between response to treatment and time to treatment initiation ( $r=0.527$ ,  $p=0.184$ ) and initial best corrected visual acuity (BCVA) ( $r=0.517$ ,  $p=0.120$ ). The authors noted that patients with initially low BCVA show poorer response to treatment and emphasized that fortified antibiotics still have a place in the treatment of bacterial keratitis and remain the best alternative to fluoroquinolone therapy (See pages 258-263).

Yılmaz et al. investigated the consistency between optical coherence tomography (OCT) (Spectralis, Heidelberg Engineering, Heidelberg, Germany) images and OCT angiography (OCTA) (AngioVue, Optovue Inc., Fremont, CA, USA) images for the measurement of retinal nerve fiber layer thickness (RNFLT) in patients with primary open angle glaucoma (POAG). Intraclass correlation coefficients used to test the agreement between the two devices indicated excellent agreement in the global average and the superior, inferior, and temporal quadrants and good agreement in the nasal quadrant. In contrast, in Bland-Altman analysis there was poor agreement in all measurements due to the wide limits of agreement and statistically significant proportional bias ( $p>0.05$ ), while linear regression analysis models showed strong association between peripapillary vessel density (VD) and RNFLT measured by both devices. The authors concluded that data obtained from the two devices should not be used interchangeably but stated that due to the strong correlation between VD and RNFL values with both devices, the AngioVue could be used in glaucoma management for the measurement of RNFLT as well as VD (See pages 264-270).

Uzlu et al. conducted a study evaluating the relationship between body position and intraocular pressure (IOP) values measured by

rebound tonometry (RT) in healthy children. In the study, IOP values of 49 eyes of 49 healthy pediatric patients with normal ophthalmic examination findings were measured with RT in standing, sitting, and supine positions and there was no statistically significant difference between the measurements ( $p=0.846$ ,  $p=0.751$ ,  $p=0.606$ ). However, there was a statistically significant correlation between corneal thickness and IOP values in all measurements (See pages 271-274).

A prospective study by Barış et al. aimed to determine the frequency of inadequate response to intravitreal (IV) anti-vascular endothelial growth factor (anti-VEGF) treatment in active neovascular age-related macular degeneration (nvAMD) and to define subgroups of poor responding eyes. A total of 235 eyes of 202 treatment-naive patients received ranibizumab and those with recurrence, persistence, or worsening despite treatment were classified as "poor responders." The authors found that 78 eyes (33.2%) showed poor response and that the frequency of pigment epithelial detachment (PED) and occult choroidal neovascularization (CNV) was statistically significantly higher in eyes that responded poorly to treatment ( $p<0.001$ ). This finding emphasizes that determining eyes' pre-treatment characteristics and performing subgroup analysis will be beneficial to modify and improve treatment strategies in such cases (See pages 275-282).

Yılmaz Tuğan et al. analyzed changes in the reflectivity of the retinal pigment epithelium (RPE), ellipsoid zone (EZ), and outer limiting membrane (OLM) in OCT images and evaluated the relationship between reflectivity change and visual acuity improvement in 24 eyes of 24 patients with idiopathic full-thickness macular holes closed after vitrectomy. They observed significant increases in EZ reflectivity (absolute and relative) at postoperative 12 months compared to postoperative 1 month and a significant positive correlation between the increase in EZ reflectivity and BCVA, and concluded that EZ reflectivity could be an indicator of functional and anatomical improvement after macular hole surgery (See pages 283-287).

Kalaycı evaluated the causes and frequency of blindness in the adult population of Somalia according to the criteria of the World Health Organization. Based on data from 2605 patients over the age of 18, the overall blindness rate was 9.8% and the most common causes in the monocular blindness group were trauma complication (23.6%), cataract (19%), and diabetic retinopathy (13.2%), while the most common causes in the bilateral blind group were cataract (26.9%), diabetic retinopathy (21.1%), and glaucoma (15.4%). It was noted that trauma is the most important cause of blindness in Somalia due to security conditions in the country (See pages 288-292).

Primary melanoma of the eye can occur in 4 different anatomical structures of the eye: the orbit, eyelids, conjunctiva, and uvea. Conjunctival melanoma is a rare disease that accounts for about %5 of all ocular melanomas. It can occur de novo or arise from a conjunctival nevus or primary acquired melanosis. In this issue's review,

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Koç and Kıratlı address the clinical findings, differential diagnosis, diagnostic tools, and staging of conjunctival melanoma. They explain to the readers that biomicroscopic examination is indispensable in the diagnosis, identification of additional features, and follow-up of the disease while other imaging methods can be used as auxiliary tools, albeit with their own limitations (See pages 293-303).

Viral endotheliitis is endothelial inflammation and damage characterized by corneal edema, keratic precipitates (KPs), mild anterior chamber reaction, and elevated IOP. The main causes are herpes simplex virus (HSV), varicella zoster virus (VZV), mumps virus, and cytomegalovirus (CMV). CMV-associated endotheliitis can occur de novo or secondary to ocular surgery in immunocompetent individuals. Çelik Büyüktepe and Yalçındağ report a patient who was using local and systemic immunosuppressive agents due to graft rejection following penetrating keratoplasty and presented with localized corneal edema, coin-shaped KPs, and elevated IOP on examination at postoperative 4 years. CMV-DNA was detected by polymerase chain reaction analysis of an aqueous humor sample, and the patient was started on oral valganciclovir 900 mg twice a day, topical dexamethasone drops 5 times a day, ganciclovir gel 5 times a day, and topical dorzolamide-timolol drops twice a day. The patient's graft edema and anterior chamber reaction resolved within 2 months of follow-up and IOP was controlled with topical therapy. The authors point out the fact that local or systemic immunosuppressants used after keratoplasty may trigger CMV reactivation, that CMV should be considered among the causes of viral endotheliitis, and ganciclovir therapy should be initiated immediately in cases with coin-shaped KPs (See pages 304-307).

Kayıkçıoğlu et al. present 6 cases in which the trypan blue dye used to stain the anterior capsule migrated into the vitreous cavity and stained the posterior capsule and anterior vitreous during phacoemulsification and intraocular lens (IOL) implantation surgery. The IOL was implanted in the capsular bag with no problems in 5 of the patients, while the other patient had trauma-induced iris and zonular defects and a sutured IOL was implanted in the same session. With this case report, the authors emphasize that trypan blue staining of the posterior capsule and anterior vitreous can occur during phacoemulsification in eyes with risk factors related to cataract surgery as well as in eyes with no zonular pathology, and that the migration of trypan blue to the posterior segment can impair visualization of the posterior capsule and capsulorhexis and thereby increase the risk of operative complications (See pages 308-312).

Leber's hereditary optic neuropathy (LHON) is a maternally inherited mitochondrial DNA-related disease. Characteristic findings in patients with asymptomatic and early-stage disease include optic disc hyperemia, vascular tortuosity, and peripapillary telangiectatic vessels. The increase in capillary vessel size and tortuosity in the optic disc

suggests that the disease is a neurovascular disorder. In 2 male LHON patients aged 28 and 8 years, OCTA revealed capillary dropout areas and reduced radial peripapillary capillary density in the quadrants that showed reduced RNFLT on OCT. Progressive decrease in radial peripapillary capillary density and RNFLT were demonstrated in the patients' 12- and 30-month follow-up. Bingöl Kızıltunç et al. note the importance of OCTA imaging in the evaluation of changes in LHON patients and asymptomatic carriers (See pages 313-316).

Koçer et al. describe a 12-year-old boy under follow-up for amblyopia who presented with low vision in his left eye and was found to have BCVA of 1.0 in the right eye and 0.3 in the left eye. Increased horizontal cup-to-disc ratio was observed in both optic discs on dilated fundus examination, RNFLT measurement showed diffuse nerve fiber loss, and bitemporal hemianopsia was detected in visual field test. Magnetic resonance imaging revealed a lesion that filled and widened the sella and suprasellar cistern and compressed the optic chiasm, and the patient underwent surgery via transcranial approach. The pathologic diagnosis was craniopharyngioma. The authors recommended using additional tests before making a diagnosis of amblyopia in children with suspicious examination findings and inadequate cooperation (See pages 317-320).

Foveal hypoplasia is defined as the underdevelopment of the fovea and is characterized by nystagmus with low visual acuity. It is usually associated with optic nerve hypoplasia, familial exudative vitreoretinopathy (FEVR), Stickler syndrome, albinism, aniridia, and microphthalmia. It can also be isolated, occurring in the absence of any other pathology. Değirmenci et al. examined a 19-year-old young man who presented with the complaint of nonprogressive visual impairment but exhibited no marked anterior or posterior segment pathology except for low visual acuity and bilateral latent nystagmus. On OCT imaging, they found that the foveal pit was absent in both eyes, OCTA showed that the foveal avascular zone and central black gap were absent, and there was no hypoautofluorescence in the area corresponding to the fovea in fundus autofluorescence images. The authors diagnosed the patient as having foveal hypoplasia based on these findings and emphasized the importance of evaluating patients with low visual acuity using multimodal imaging methods (See page 321-323).

We hope you will find the articles featured in our fifth issue this year interesting and guiding in your professional practice.

**Respectfully on behalf of the Editorial Board,  
Özlem Yıldırım, MD**