

2019 Issue 3 at a Glance:

This issue of our journal includes six original articles, one review, and four case reports representing national and international research on the cornea, glaucoma, and retinal disease. We hope you will find these articles both interesting and beneficial.

Keratoconus is a bilateral, progressive corneal disease characterized by central corneal thinning, high myopia, and irregular astigmatism. Even if one eye is unaffected initially, it eventually becomes involved in the majority of cases. With the development of the Scheimpflug camera system (Pentacam), which can also evaluate the posterior corneal surface, it was shown that there are early changes in the posterior surface of the cornea in eyes considered clinically normal. Değirmenci et al. compared the keratoconus eyes (Group 1) and fellow eyes (Group 2) of 31 patients initially diagnosed as unilateral keratoconus and the right eyes of 30 healthy individuals (Group 3) based on detailed anterior segment parameters obtained with Pentacam at time of presentation. The results of their comparisons showed that eyes not initially diagnosed as keratoconus were not completely normal, and the authors emphasized the importance of monitoring for disease progression and advising avoidance of mechanical trauma in these patients (see pages 117-122).

Özalp et al. investigated the phosphate and osmolarity levels of 53 eye drops commercially available in Turkey and used on a chronic basis. They found that approximately 40% of antiglaucoma drops and about 60% of corticosteroid and antihistamine drops contained phosphate at levels exceeding the physiological concentration in tears (1.45 mmol/L), while most products in the artificial tear group were hypoosmolar (71%) or isoosmolar (21%). The authors concluded based on their results that being familiar with the chemical composition of topical formulations and selecting drops that have suitable tonicity and pH based on the disease profile and contain a buffer that will not promote corneal deposition will help prevent ocular surface complications associated with the use of eye drops (see pages 123-129).

Mayalı et al. conducted a study comparing intraocular pressure measurements taken with the Icare One tonometer and the Icare Pro tonometer for clinical use. Measurements were first obtained with the Icare Pro and then with the Icare One in 52 right-handed glaucoma patients and 52 right-handed

healthy subjects, and the comparison showed that Icare One measurements were lower than those taken with the Icare Pro (see pages 130-133).

A prospective study by Abdullayev et al. evaluated the incidence of glaucoma in patients with obstructive sleep apnea syndrome (OSAS) who did and did not use continuous positive airway pressure therapy. The study included a total of 59 polysomnography-confirmed OSAS patients with mild (19 patients), moderate (16 patients), or severe (24 patients) disease based on apnea-hypopnea index (AHI) values, as well as 19 healthy controls. Average ganglion cell complex (GCC) thickness in the left eyes of the mild OSAS group, GCC thickness in the inferior and inferonasal sectors of both eyes in the mild OSAS group, and minimum GCC thickness in the left eyes of all OSAS groups were significantly lower when compared to the control group. This result highlights the importance of periodic evaluation of retinal nerve fiber layer (RNFL) and GCC thickness in OSAS patients (see pages 134-141).

Vayısoğlu et al. conducted a survey of 254 lecturers using the Ocular Surface Disease Index (OSDI) and a questionnaire prepared based on a literature review. The OSDI scores indicated that dry eye was mild in 20.5% of the participants, moderate in 15%, and severe in 36.5%. Significant differences were observed between OSDI score categories in terms of sex, smoking status, use of glasses, previous diagnosis of dry eye, and presence of dry eye symptoms. The authors concluded that only daily duration of computer use was significantly associated with OSDI score (see pages 142-148).

Uğurlu et al. evaluated the effectiveness of diagnostic methods such as color fundus photography, 10-2 central visual field, microperimetry (MP), optical coherence tomography (OCT), and fundus autofluorescence (FAF) in the follow-up of 300 eyes of 150 patients who had been using hydroxychloroquine for at least 2 years. MP, FAF, OCT, fundus photography, and central 10-2 visual field examinations performed 3 times at 6-month intervals revealed significant differences in FAF with duration of use and cumulative dose of hydroxychloroquine, demonstrating that subjective methods should be used together with objective methods such as FAF for patient follow-up and early detection of toxic maculopathy (see pages 149-153).

Low vision rehabilitation is gaining importance due to the longer life expectancy at birth and rising incidence of age-

TURKISH JOURNAL OF OPHTHALMOLOGY



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related macular degeneration. In low vision rehabilitation, vision loss may be central, peripheral, or associated with media opacity. The type of rehabilitation required by a low vision patient varies depending on their visual acuity, age, sociocultural status, and especially their diagnosis. The aim of low vision rehabilitation is to enable patients to use their residual vision as effectively as possible to make their lives easier, allow them to lead independent, productive lives, and enhance their quality of life. In this issue's review, Altınbay and İdil share with readers a comprehensive overview of current low vision rehabilitation and treatment methods (see pages 154-163).

Tularemia is a zoonotic infection caused by *Francisella tularensis*, a highly virulent gram-negative coccobacillus. Köse and Hoşal discuss a 33-year-old man who reported having systemic complaints while traveling abroad 1 year earlier, followed by enlargement of the right cervical lymph nodes. In Turkey he was recommended various antibiotic therapies in different hospitals for presumed pharyngitis, but his symptoms did not resolve. Based on a positive *F. tularensis* agglutination test in a university hospital, he was diagnosed with oropharyngeal tularemia and treated with streptomycin and doxycycline. The lymphadenopathy regressed, but a few weeks later he presented with complaints of epiphora and recurrent swelling, hyperemia, and pain in the lacrimal sac area of the right eye. He was started on oral amoxicillin-clavulanic acid 1 g twice daily and topical ciprofloxacin drops every 6 hours. Dacryocystorhinostomy was recommended after evaluation in the otorhinolaryngology department. This report draws attention to the fact that nasolacrimal duct occlusion and subsequent dacryocystitis may occur as a rare complication of oropharyngeal tularemia (see pages 164-167).

Kızıloğlu et al. describes a 63-year-old woman with a history of metastatic breast cancer who presented with complaints of diplopia and right abduction deficit. Abduction was completely restricted in the right eye and globe retraction and narrowing of the palpebral fissure were observed on abduction. Magnetic resonance imaging (MRI) showed isolated enlargement of the right medial rectus muscle. Biopsy confirmed the diagnosis of breast carcinoma metastasis in the right medial rectus muscle. Radiotherapy and chemotherapy for the orbital mass resulted in partial recovery of right abduction at 15 months. This case report emphasizes that ocular motility deficits in patients with a history of breast cancer should raise suspicion of a possible

orbital metastatic lesion involving the extraocular muscles (see pages 168-170).

Metastasis to the optic nerve is very rare. A 39-year-old female patient who had undergone surgery and chemotherapy 6 years earlier due to breast cancer presented with complaints of progressive reduction in visual acuity in the right eye for the last 2 months. Fundus examination revealed peripapillary flame-shaped hemorrhages and an enlarged optic disc infiltrated by a yellowish mass. Humphrey visual field test of the right eye revealed an enlarged blind spot and altitudinal defect. OCT showed significant RNFL thickening in all four quadrants in the right eye. Fluorescence angiography (FA) of the right eye revealed a hyperfluorescent mass on the optic disc with no signs of infiltrating optic neuropathy. No pathological findings were detected on MRI. Aghdam et al. first considered a diagnosis of infiltrative optic neuropathy based on the patient's history, symptoms, and findings. The patient was referred to the oncology department for further systemic evaluation and necessary interventions. With this case, the authors point out that in cancer patients who develop optic neuropathy, metastasis and infiltration should be the primary suspicion unless there evidence to the contrary (see pages 171-174).

Ekinci et al. describe the case of a 54-year-old man who presented with reduced vision in the left eye that he had noticed for about a week. Based on indirect ophthalmoscopy, OCT, and FA, they diagnosed the patient with macular edema associated with branch retinal vein occlusion and decided to administer an intravitreal dexamethasone implant. During injection, transient hypotony was noted just before pulling the trigger. At 1-month follow-up, sporadic hemorrhages and a full-thickness retinal hole about 1 disc diameter in size were noted in the temporal region of the macula, and laser photocoagulation was applied around the retinal hole. The authors suspected that this rare complication may have resulted from the transient hypotony during implantation shortening the distance between the entry site and retina, enabling the implant to cause direct damage to the retina. They emphasized that for this reason, patients who show globe softening during injection require extra caution, and that the clinician should at least carefully aim away from the macula (see pages 175-177).

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