

## Highlights in neuro-ophthalmology



In this thematic issue of the Saudi Journal of Ophthalmology, the original contributions of various authors of acknowledged prestige in the field of neuro-ophthalmology are collected.

This subspecialty encompasses what is now an increasingly wide field. This breadth certainly makes it difficult to choose different neuro-ophthalmology topics for review that may be of general interest to general ophthalmologists and ophthalmologists in training. I believe that the topics developed by these guest authors not only are some of the most relevant within this subspecialty but also show that neuro-ophthalmology is a field with continuous diagnostic and therapeutic advances.

Although the world's largest percentage of physicians practicing neuro-ophthalmology is undoubtedly in the United States, we cannot forget that fellowship programs train people from distant regions or countries. This process results in the progressive globalization of the practice of neuro-ophthalmology. The Middle East is a good example of this outcome, with a significant increase in professionals working in this area and with the gradual emergence of training programs or fellowships in the region.

The globalization of neuro-ophthalmology is the reason that neuro-ophthalmologists of different nationalities and geographic locations have contributed to this issue (United States, Colombia, Argentina, Portugal, Spain, etc.).

In this issue, the review by Kanagalingam et al.<sup>1</sup> systematically reviews how to correctly diagnose and treat cerebral venous sinus stenosis. The data provided in this review demonstrate that the presence of venous sinus stenosis, which can be detected using new neuroimaging techniques, is much more frequent than often thought. When identifying patients who would truly benefit from the use of endovascular techniques, it is important to first confirm the existence of stenosis using contrast-enhanced magnetic resonance venography (MRV) and then to demonstrate the presence, through cerebral venography, of a pressure gradient on both sides of the stenosis. Only in this manner can cases of secondary and transitory stenosis be distinguished from intracranial hypertension when presented with cases of anatomically established stenosis.

Systematic review of the use of modern techniques of OCT (optical coherence tomography) in neuro-ophthalmology by Rebolleda et al.<sup>2</sup> demonstrates its enormous potential when used as a diagnostic tool in this field. Today, its use is

unquestioned for multiple sclerosis. For example, clinical trials in multiple sclerosis employ OCT as one of the most reliable clinical markers of clinical progression. However, the use of OCT has increasingly become important in assessing other clinical entities such as ischemic optic neuropathy, papilledema, optic nerve drusen, dominant optic atrophy, Leber's hereditary optic neuropathy, etc. The growing number of scientific publications on the use of OCT in neuro-ophthalmology provides irrefutable scientific evidence.

The review of idiopathic intracranial hypertension (IIH) in the Middle East demonstrates a problem of growing magnitude: the increasing prevalence of obesity in countries of the region. A sedentary lifestyle and mimicking Western customs such as eating fast food may be some of the causes. These factors would explain why some of the countries in the Middle East have prevalence rates of IIH that are higher than in Western countries. The prevalence rates cited in the review of Almarzouqi et al.<sup>3</sup> should spur the medical communities of those regions to initiate public awareness campaigns against obesity. The present epidemic of obesity in the region not only is reflected in the higher prevalence of IIH but also has dire consequences for increased cardiovascular risk factors (diabetes, hypertension, dyslipidemia) in these countries.

Authors Amador-Patarroyo et al.<sup>4</sup> develop the topic of congenital anomalies of the optic nerve. These authors emphasize the importance of recognizing these anomalies early because many of them may have more extensive malformations that can involve the central nervous system (as is the case in morning glory syndrome) or major hormone deficiencies (as is the case in septo-optic dysplasia syndrome).

The update on facial paralysis developed by Portelinho et al.<sup>5</sup> emphasizes the etiological classification of facial paralysis given that our medical approach will be different towards a patient with Bell's palsy compared with a patient with paralysis secondary to tumor infiltration or compression or systemic vasculitis. In addition, the various therapeutic approaches available are also detailed in their article.

As for giant cell arteritis (GCA), the importance of suspecting this disease early before it causes devastating visual sequelae such as blindness cannot be over emphasized. Chacko et al.<sup>6</sup> not only highlight this aspect but also note the importance of the challenge of identifying cases of occult GCA where classical clinical symptoms are absent and values

of the erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) level may be within normal limits.

The review of ophthalmological diseases related to immunoglobulin (Ig)G4 by Méjico<sup>7</sup> discusses the very latest on this topic. This review emphasizes the key points for achieving a correct diagnosis based on typical clinical presentation, laboratory data and radiological findings and specific histopathological and immunohistochemical features. Contrary to what one may think, following recent publications, the conclusion that serum levels of IgG4 have no significant value in the diagnosis of this disease is nearing consensus.

Finally, the review presented by Ebner et al.<sup>8</sup> demonstrates the importance of recognizing the association between a sixth cranial nerve palsy and the presence of Horner's syndrome given that the lesion is anatomically focused in the cavernous sinus. This work again emphasizes the priority of a thorough clinical exploration in neuro-ophthalmology. Thus, for patients such as those presented by Ebner and colleagues, the clinician should properly guide the radiologist to the region of interest to be evaluated to discover small tumors or aneurysms that might otherwise go unnoticed.

## References

1. Kanagalingam S, Subramanian PS. Cerebral venous sinus stenting for pseudotumor cerebri: a review. *Saudi J Ophthalmol* 2015;**29**:3–8.
2. Rebolleda G, Diez-Alvarez L, Casado A, et al.. OCT: new perspectives in neuro-ophthalmology. *Saudi J Ophthalmol* 2015;**29**:9–25.
3. Almarzouqi SJ, Morgan ML, Lee AG. Idiopathic intracranial hypertension in the Middle East: a growing concern. *Saudi J Ophthalmol* 2015;**29**:26–31.
4. Amador-Patarroyo MJ, Pérez-Rueda MA, Tellez CH. Congenital anomalies of the optic nerve. *Saudi J Ophthalmol* 2015;**29**:32–8.
5. Portelinha J, Passarinho MP, Costa JM. Neuro-ophthalmological approach to facial nerve palsy. *Saudi J Ophthalmol* 2015;**29**:39–47.
6. Chacko JG, Chacko JA, Salter MW. Review of Giant cell arteritis. *Saudi J Ophthalmol* 2015;**29**:48–52.
7. Méjico LJ. IgG4-related ophthalmic disease. *Saudi J Ophthalmol* 2015;**29**:53–6.
8. Ebner RN, Ayerza DR, Aghetoni F. Sixth nerve palsy + ipsilateral Horner's Syndrome = Parkinson's Syndrome. *Saudi J Ophthalmol* 2015;**29**:63–6.

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