

Handheld spectral domain optical coherence tomography seems to be a must-have device for future treatment methods of hereditary maculopathies

Dear Sir,

We have read with great interest the article entitled "The use of handheld spectral domain optical coherence tomography in pediatric ophthalmology practice: Our experience of 975 infants and children."^[1] We thank the author for presenting their experiences with handheld spectral domain optic coherence tomography (SD-OCT). This study has showed us that SD-OCT is a revolutionary investigation for diagnosis in pediatric population. Especially, early detection of maculopathies by this device is very exciting. Hereditary maculopathies often do not give any clinical finding in the examination of children. If there could be a development in treatment of these diseases, it will be crucial to detect maculopathy early to prevent permanent photoreceptor and/or retina pigment epithelium (RPE) injuries. Hereditary maculopathies are generally genetic disorders and characterized by progressive

photoreceptor and/or RPE degeneration.^[2] There are promising studies about the treatment of these diseases by gene therapy. In a recent study, retinitis pigmentosa GTPase regulator gene augmentation by adeno-associated virus 2/5 vector has been shown to prevent photoreceptor degeneration.^[3] However, it investigated that this therapy could only be useful when applied before degeneration of photoreceptors. Hence, if it could be possible to cure maculopathies by genetic methods, early diagnose will be very important to survive photoreceptors. Another treatment area for hereditary maculopathies is cell replacement therapy. It could be possible to transplant stem-cell-derived photoreceptor precursors to the diseased eye. There is increasing publication about this therapy.^[4] If there will be possible to apply such a therapy, early diagnose, and treatment of disease will provide better outcomes and prevent amblyopia. Thus, handheld SD-OCT seems to be a must-have device for future revolutionary treatment methods in this area of ophthalmology.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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Access this article online

Quick Response Code:	Website:
	www.ijo.in
	DOI: 10.4103/0301-4738.179730

Cite this article as: Diner O, Aksoy Y, Kaya A, Sevinç MK. Handheld spectral domain optical coherence tomography seems to be a must-have device for future treatment methods of hereditary maculopathies. *Indian J Ophthalmol* 2016;64:171-2.