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Case Report

Low vision management in heredomacular degeneration: a case report

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ABSTRACT

Low vision devices are used to improve the visual performance of patient with low vision, hence allowing them to carry out their daily activities. The objective was to provide best low vision correct to a patient with heredomacular degeneration. A 10 year old girl came to our OPD in September 2015. The patient had history of reduced vision in both eyes since, 1 year. She was now unable to distinguish writing on the school blackboard. Her mother had observed over the last 6 months that she held reading matter very close to his face. Her mother also reported that she preferred to study in dim illumination. The patient had no known precipitating factor and no family history of similar symptoms. The patient had history of using glasses. The patient was diagnosed to have adult onset heredomacular degeneration and explained that the visual prognosis is guarded. In view of no definite treatment for this condition, the patient was prescribed spectacles. Heredomacular degenerations tend to be progressive and a long-term follow up is required.

Keywords: Low vision, Management, Heredomacular, Degeneration, Tomography

INTRODUCTION

Heredomacular degenerations or macular dystrophies refer to a group of diseases which present with certain common features.[1-4] These include gradual onset with gradual progression, here do-familial nature, bilateral (may be asymmetric) and occasional involvement of the central nervous system.[5-8] The typical lesion at the macula is described to have a pigmented and worm-eaten appearance. It is typically clearly demarcated and is usually one disc diameter in size. There is an abnormal foveal. It also causes vision loss.[9-11] The diagnosis is often made on clinical fundus examination though certain investigations such as multifocal electroretinography, electrooculography and optical coherence tomography may help in confirmation.[12] Low vision device may be the most significant tool for improving visual skills. They can be optical or non-optical, and they can also be magnification systems. Non-optical aid devices, in which

the patient's remaining visual function or use signals to stimulate one of the other senses, played an essential part in poor vision treatment. In patients with limited vision, illumination, large-print books, improved contrast, typo scope, reading stands, and sunglasses or eyeglasses with glare-reducing filtering lenses can be used alone or in combination with optical devices.[13]

CASE REPORT

A 10 year old girl came to our OPD in September 2015. The patient complained of gradual blurring of vision in both eyes since, 1 year for distance and near. She was now unable to read what was written on the school blackboard and in the notebooks. She also complained of occasional headaches. Her mother had observed over the last 6 months that she held reading matter very close to her face. Her mother also reported that she preferred to study in dim illumination. The patient had no known precipitating factor and no family history of similar symptoms. The patient had history of using glasses. The patient had no history of head or eye injury. The patient had no systemic illness. The patient had no history of using any drugs on examination, the unaided visual acuity in both eyes was 6/60 (Table 1 and 2).

Table 1: Patient visit details.

Visit 1 LVA clinic (26/09/2015)		
VA unaided	RE	LE
	6/36	6/36
Near VA unaided	N18	N18

Table 2: Refraction value at the time 1st of visit.

PGP	**RE**	**-0.75/-2.50 at 180**	**6/36**
	LE	-0.75/-3.00@10	6/36
Refraction	RE	-0.75/-2.50@180	6/36
	LE	-1.00/-3.00@180	6/36
Near add.	BE	+2.50 DS	N8

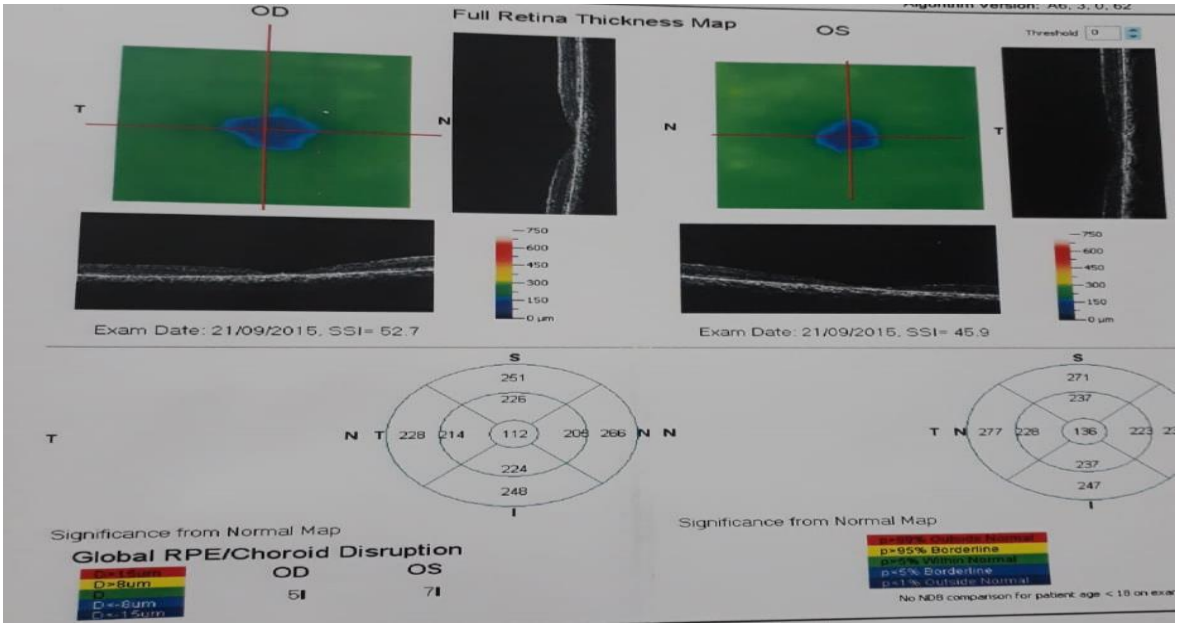

Figure 1: OCT investigation report.

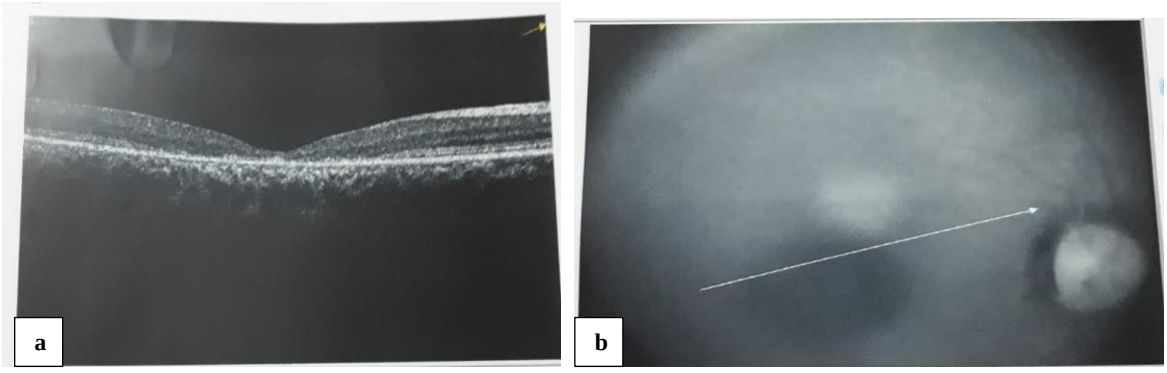

Figure 2 (a and b): OCT report showing macular thickness and heredomacular degeneration.

Table 3: Patient 2nd visit details.

Visit 2 (14/03/2016)			
Refraction	RE	-1.25/-2.50@180	6/24
	LE	-1.75/-3.00@180	6/24
Near add.	BE	+1.50DS	N6

Table 4: Refraction value at the time 2nd visit.

Visit 3 (06/12/2016)			
Refraction	RE	-1.25/-2.50@180	6/24
	LE	-1.75/-3.00@180	6/24
Near add.	BE	+1.00DS	N6

3.5× spectacle mounted telescope was tried but patient was not cooperating. Finally, she was advised for bifocal glasses.

Near vision N6 (unaided)

IOP in all visit was normal. Anterior segment examination appeared normal and the pupillary reactions were brisk. Fundus examination revealed HMD. OCT shows, normal vitreo retinal interface. with altered foveal contour and gross Foveal atrophy, generalised thinning of all retinal layer on the OCT was present and the IS-OS junction was absent at Fovea.

So now patient using monofocal glasses and very comfortable in near vision. This results in the eyes seeing binocularly single inspire of a manifest squint. Under binocular condition the fovea and extrafoveal point shared the common subject visual direction. So here we got the advantage of developing ARC (Figure 1 and 2).

DISCUSSION

A low vision impairment in children due to heredomacular degeneration should be known by every ophthalmologist and optometrist that the impairment can affect daily life activities.[1] Every child with low vision due to heredomacular degeneration needed to be recognized early and should recommended low vision aids. Patients with low vision can enhance their residual vision and perhaps relearned to perform lost functional vision, restoring their capacity to conduct daily tasks like as reading.[2] Low vision device was the most significant solution for enhancing visual skills. That might be an optical or non-optical device as well as a magnification system. Higher adds, high-plus reading glasses, magnifiers and telescopes were all traditional magnification choices.[3] Modifying a job such as moving closer to distant goals; adopting bigger formats such as large-print checks or substituting with audio such as digital audio books available through libraries or online, were all practical answers to issues.[13]

CONCLUSION

A number of conditions of a hereditary nature and with a familial incidence are classified under HMD. They are characterized by bilateral degenerative changes in the macular area without de-generative changes in the central nervous system. This patient was diagnosed to have adult onset heredomacular degeneration and explained that the visual prognosis is guarded. In view of no definite treatment for this condition, the patient was prescribed spectacles. Heredomacular degenerations tend to be progressive and a long-term follow-up is required.

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