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CONGENITAL MYOPIA AND ASTIGMATISM;CLINICAL SITUATION

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Introduction. When the error of nearsightedness is higher than -6.0 Diopters, it is considered to be high myopia .Astigmatism according to the severity; mild astigmatism less than -2.00D, moderate astigmatism 2.00D to 4.00D and severe astigmatism more than 4.00D. Objectives. Qualitative research of rare case of high myopia,present along with astigmatism and how to make corrections for the refractive errors

Materials and method. The case study which includes the clinical picture, anamnesis, visual acuity (VA), autorefractometry,Specular microscopy,ultrasound examination of eyes, optical coherence tomography (OCT) and test for retinal correspondence (Worth Four Dot Test).

Results and discussion. The study included a case of 24-year-old female (Colombo, Sri Lanka) who has no family history of high myopia or astigmatism. The individual was first diagnosed in 3 years old with complaints of convergent strabismus and several behavioral changes such as stressing out eyes to see objects, and watching television in a very short distance. In 2001 VA count fingers (CF). The first prescription for the right eye (OD): sphere (sph) -13.00D, cylinder (cyl) -2.50D, axis (ax) 10. For the left eye (OS); sph – 11.00D, cyl -2.50D, ax 170. VA with correction in both eyes 6/30.According to the results on 23/03/2022 OD: sphere -17.00D,cylinder -3.00D, axis 20 and OS:sphere -16.50D, cylinder -3.75D,axis 157 and the VA is 6/7.5.In the results of the autorefractometry; OD sph -22.00D, cyl -1.50D, ax 20 and OS sph -18.75D, cyl -3.00D, ax 161.In the Worth Four Dot Test, the female has abnormal retinal correspondence (ARC), which provide the evidence that the individual manifest diplopia.The axial length (AL) of OD is 31.7mm, OS is 30.8mm. In the ultrasound examination posterior staphyloma shown in both eyes.The OCT (03/2022), central subfield thickness (microns); OD 239 & OS 245,cube volume (mm3); OD 7.9 & OS 7.5, cube average thickness (microns); OD 218 & OS 212. In comparison with the OCT done in 2017 and the recent OCT (03/2022), there is no significant changes in the macular thickness.In specular microscopy, corneal endothelial characteristics (CD); OD 2877 and OS 2781. The corneal central thickness (CCT) OD 528 and OS 541,which indicate that individual has thin cornea.To correct 2 refraction errors, spectacles and soft contact lenses used by the individual.The gas permeable hard lens able to correct both errors at the same time.Phakic IOL surgery able to make permanent correction.

Conclusion. 24 year old female, with congenital myopia shown only -4.00D change in sphere.No significant change in cylinder power, therefore astigmatism is stable. VA is in good condition. Individual is able to perform activity in the capacity of health adult, with spectacles.Phakic IOL is the only permanent solution but with high risk of post operative complications.