Refractive Red Reflex Test in Zonular Cataract

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Clinical Image

Here hypermetropia in a 4 year old with zonular cataract (Fig. 1) is demonstrated with red reflex with indirect ophthalmoscopy as a bright area is seen in inferior part of the eye (Fig. 2) [1-3]. It is hard to pick up the same sign using red reflex with direct ophthalmoscope (Fig. 3) due to lesser distance between illumination and visualization axes in direct ophthalmoscope (as compared to indirect) allowing formation of better crescent that too just only through a peripheral rim of clear media in case of indirect ophthalmoscopy (Fig. 2,3) [2,3]. Axial length of the same eye as depicted was 19.68 mm on ultrasound A-scan and keratometry using autorefractor-keratometer was 46.5/47.5D@120°/30°. Cycloplegic refraction revealed a spherical equivalent of +6.5D. We would thus like to propose that red reflex test with indirect ophthalmoscope can be done to elicit refractive errors even in cases of media opacity provided some area even so in periphery as in our case permits reflex formation.

Figure 1: Right eye of the child showing zonular cataract.

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Figure 2: Indirect distant ophthalmoscopy of the same eye showing central opacity of zonular cataract with inferior bright glow signifying hypermetropia.

Figure 3: Direct distant ophthalmoscopy of the same eye showing central opacity of zonular cataract with poor evidence of any refractive errors as far as crescent formation is concerned.

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