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## Myopia Case Report – New standard of care in children

With progressive myopia already experiencing an extreme increase over the past few years, this drastic situation is further fueled by the changing eye demands associated with the Covid-19 crisis. This Case Report shows how myopia management was performed in an 8-year-old exophoric patient.

### Initial situation

Maria is an 8-year-old Caucasian girl who came to our office with her myopic mother for a myopia consultation. Maria was referred by an ophthalmologist with a diagnosis of progressive myopia.

### Refraction, biometry and binocular vision

Refraction in August 2020 was R +0.25 and L plano. Now in April 2021 her refraction had changed to R -0.50 and L -0.75. Biometry with the Myopia Master confirmed elongation of the eyeball (OD 23.67 mm OS 23.60 mm).

Binocular vision status was also obtained. At near, an exophoria of 10 cm/m was measured. The gradient AC/A was 2:1. The fusional reserves were 12/14/10 in convergent direction and 10/14/2 in divergent direction. MEM retinoscopy gave a lead of R/L -0.25 D. Accommodative facility was present in both directions. From these measurements and information provided by mother and child a non-symptomatic convergence insufficiency was diagnosed.

### Risk management

Anamnesis brought to light maternal high myopia (-6.00 OU). Computer screen-time was unfortunately much too high due to homeschooling (>6h),

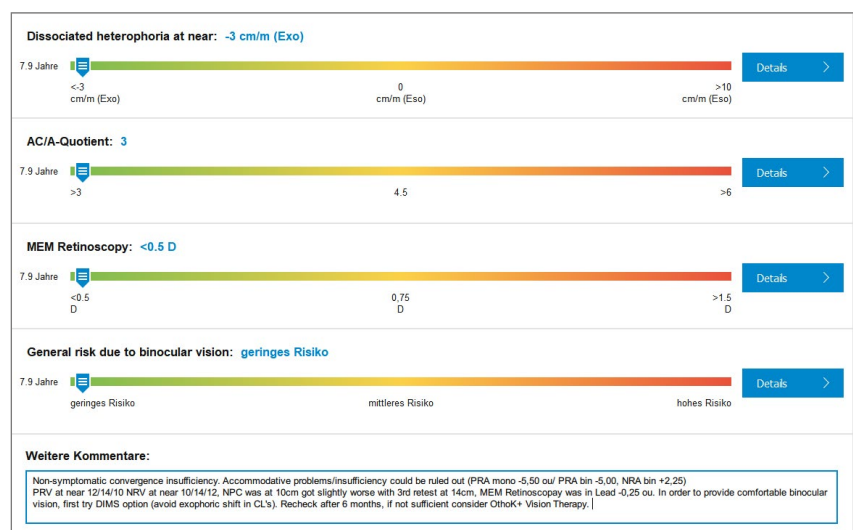


Figure 1: Risk analysis

phone time was not excessive (<1h), daylight dose was also sufficient (>2h). The eye length combined with the non-age-appropriate refraction was the major risk factor.

### Treatment

Contact lens options were not the first choice of treatment because of the moderate exophoria at near and the increased exophoric shift to be expected with a switch from glasses to contact lenses. Atropine is prescribed in our area only at a dosage of 0.01%. Since its effectiveness remains controversial, this treatment was also not applied.

We found the most suitable treatment to be a prescription for glasses with DIMS technology. The reason for this was the fact that it did not change the vergence and accommodation relations and would provide a practical and quick solution for Maria.

In addition to the glasses, it was recommended that the screens be split during homeschooling. The teacher should be projected on a larger screen at a greater distance and the laptop should remain at a normal working distance. Splitting the screens should bring more dynamism to the monotonous visual tasks triggered by a single screen.

## Conclusion

The long-term goal at our practice is to no longer provide single vision lenses to children. With purchase of the Myopia Master, the integrated risk analysis software and our passion for finding the best solution for our youngest patients, we are getting closer to this goal every day.

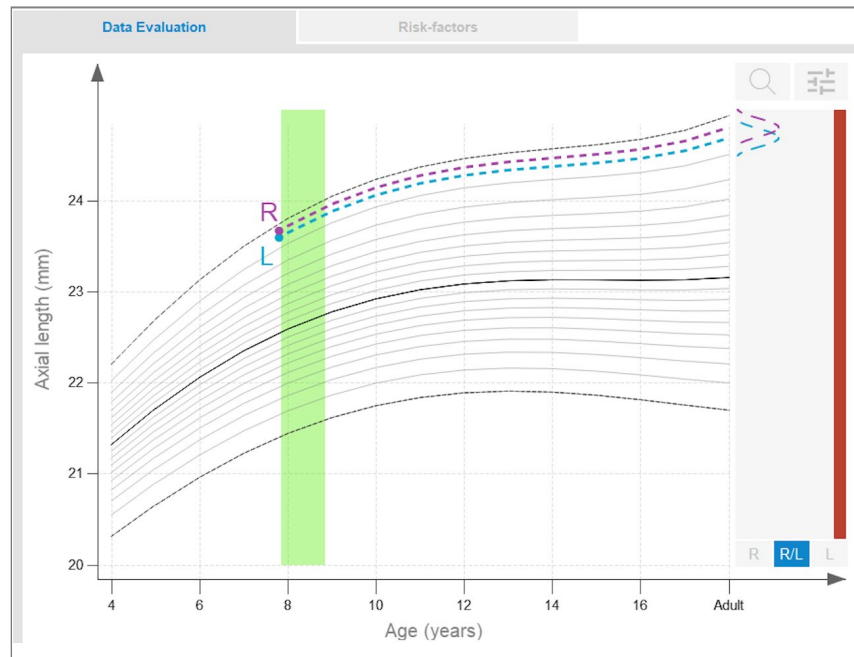


Figure 2: Normative growth chart

## Myopia Master®

Previously there was no all-in-one device available for performing refraction, axial length measurement and keratometry in combination. The only option was to purchase at least two devices, but this still left one with no myopia software.

The Myopia Master® from OCULUS now enables eye care practitioners to position themselves optimally for the future. The Myopia Master® combines the most important parameters, making myopia detection and management much easier and more reliable than ever.

