EYE – CONTACT – LENS
RESEARCH & EDUCATION

A Family Tail

Hereditary

We were just faced with a significant extension of the Corona-measures in our part of the world, which means we are spending way more time together as a family coming weeks. Let's take the time to combine 'family' and 'extension' here. 'Extension' – quite literally – refers to myopia: axial myopia per definition is just that: an eye length above the norm and too long for the refractive power of the eye's optical system.

Is myopia hereditary (passed from parent to child)? Myopia is thought to be caused by a combination of genetic and environmental factors according to the American Academy of Ophthalmology. It seems to filter down through many generations. Online platforms that try to predict myopia in the future, and thus picture a 'risk profile' on myopia development to calculate the risk on high myopia ask for 'is one of the parents myopic – or both' and sometimes request the amount of myopia of those parents.

My kids

My kids have a problem it seems. With one parent being a moderate myope with a spherical equivalent of -4.50D, and the other parent falling into 'high' category with -6.25D – they don't have the best genes for emmetropia. And they are both enthusiastic readers too, spent ample hours on their schooling (home-schooling these days of course) and – as all kids – spent their respective times on their smartphones. They are 13 and 15 years old. You do the math.

Almost as a project, I had their eyes checked. Believe it or not – they are both full, complete … emmetropes! No myopia to be found, zip – zero – nothing. Visual acuities up to 1.6 (or if desired 20/12.5, 6/3.8 or 0,63) with no prescription even vaguely detectable. Their axial lengths are normal too. This is confusing. Did we do something right? This is obviously is not about right or wrong parenting, but it does prove that myopia cannot be captured in a model per se, even if all fingers point in a certain direction.

A Tale

Just when you think: "the Dutch guy made a mistake, he can't even spell 'Tale' right': let me interrupt you. There is (another) tale to this family tail. I mean another tail to this family tale. My prescription is, to be exact RE -4.00 -1.25 105 and LE -4.00 -0.75 70. This is clearly below the 'threshold' of -6D to be used in many textbook and studies for high myopia. However, my axial length measured 26.2mm for the right and 26.4mm for the left eye. And everyone active in the myopia field knows that the threshold for axial length is 26mm. I am – so to speak – a 'high risker' for myopia pathology and need to get my retinas checked.

What this proves is that in health care in general, but surely in myopia management, every single 'case' is different. It will be very hard to apply general rules to the myopia population, and in that line to come up with 'one-size-fits-all' solutions. It will call on our flexibility, creativity in addition to our professionalism – to manage myopia. I can't even make sense of my own family. That is not exclusive to myopia by the way, but that is a different story.

Eef@online_A_Family_Tail
04-04-2020

This series Eef@online series is kindly supported by an educational grant from Contamac