## Ophthalmology will have to face Myopia!

Enrico Nitschke, CEO of OCULUS Brasil, talked with the users of the first Myopia Master in Brazil about their approach to myopia management.

Thank you, Dr Leonardo de Freitas Teodoro and Dr Marco Túlio de Freitas Teodoro for your time and for giving us this interview. Your clinic, Dr Marco Túlio Costa Teodoro Eye Clinic in Vilhena – RO, is the first in Brazil to operate an OCULUS Myopia Master.

We know that you have been concerned about the incidence of myopia and have been carrying out high myopia treatment protocols since 2016. Please tell us more about this.

**Dr Marco Túlio** In our practice, we realised that although we made a point of talking about myopia and the importance of the treatment, it was difficult to convey this concern to parents. We noticed patients were largely avoiding the treatment. This sometimes has tragic consequences, because you have very high-risk cases and parents who are very caring but do not realise the importance of the treatment. Valuable time for interventions known to work best in early childhood is wasted.

What has been your experience working with the Myopia Master and what differences does it make to the clinic's everyday operation?

**Dr Leonardo** When we found out about the Myopia Master, we saw a huge opportunity to improve our dialogue with our patients and make more accurate diagnoses. The Myopia Master is like an evolutionary leap for our work, enabling us to start diagnosing, managing and treating myopia in a systematic manner.

**Dr Marco Túlio** Today, we have patients who already demonstrate low myopia or a close to myopic condition (pre-myopia) under dilation in the pre-examination. Before seeing them in our consultation room we have a standardized full examination with the Myopia Master performed by our staff. After this assessment, we finalize the evaluation together with the patient in our consultation room and give a treatment recommendation. Instead of doing several exams with several devices, it's just one exam but with multiple measurement results. This is more efficient for us and the patient.

Have you noticed a rise in myopia since the start of the pandemic in your region?

**Dr Leonardo** In relation to controlling myopia, it has appeared gradually over recent years because the myopia epidemic is a real factor. The pandemic has contributed certain factors such as the excessive use of screens (near-vision activity), as can be shown by the Myopia Master. But other factors such as hereditary influences, lifestyle habits, axial growth and the size of the eye, time spent with near-vision activities and outdoor activities have to be taken into account as well. An interesting aspect is that, in practice,

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you seldom question and clarify this in such an organised manner. Today, all our myopic patients are much better evaluated based on the guidance of the Myopia Master software.

How has the myopia software (powered by BHVI, Brien Holden Vision Institute) helped you in educating and monitoring your patients?

**Dr Marco Túlio** What the pandemic has set in motion, is highlighted by the Myopia Master. The equipment's 'holistic' view on myopia is very interesting. Furthermore, high myopia is strongly related to hereditary factors in some patients, and the device shows by correlation that they are significant. This is all very clearly presented in the software, which helps us give a strong warning to the patient. All these tests are very visual, and showing comparisons against normative curves promotes treatment compliance. The printable Myopia Report also provides us with a selection of recommendations for managing myopia, which we give to the patient's parents to take home.

When you start treating a child, do you follow up using the Myopia Master progression function?

Dr Marco Túlio Yes, and the most interesting thing we see regarding the progression is the help it provides in controlling the use or non-use of atropine. When you start using medication, there are differing opinions among different groups regarding when the medication should begin. However, the question every parent asks is: 'But when do I stop?' Because most studies say it should be at the end of puberty, at the end of ocular growth, but when exactly is that? Refraction alone is not sufficient for assessing myopia control. That is something we have concluded and which the Myopia Master has made clear to us. Refraction is not a single number, but a mix of information. It has ocular curvature and several other factors involved. In myopia, the most important factor is axial length. You have to assess axial length when you start the treatment and want to see its progression. Axial length is the big factor that will tell you: 'Now is the right time and the treatment is good', or 'no, it is not good, we need to intensify the treatment'.

And, on the other hand, we have patients who are 16, 17, 18 or 20 years old and have very good refractive stability with very stable axial length. We might consider having this patient stop taking atropine, or trying to reduce the treatment, or modify the treatment for a secondary phase. Here the device accomplishes something incredible: we can monitor the increase that will occur after resuming the treatment and the secondary effect of the drug.

**Dr Leonardo** There is no doubt that, thanks to the Myopia Master and having the data in our hands, we can improve the results of the treatment because it is now based on science and not empirical knowledge.

What is your routine approach to managing myopia today? Is it the Myopia Master alone, or do you also use other devices?

**Dr Marco Túlio** When we start examining patients with the Myopia Master and it alerts us to corneal alterations, we request an examination with the Pentacam. Then we have the patient

'under control'. These two assessments provide us with much more advanced clinical reasoning. We can deduce 'where the refractive error is going'. It gives us a much broader therapeutic arsenal. Because we continue to see the patient over a follow-up period, we can also give early diagnoses of keratoconus, for example.

What would you say, is myopia management an area of interest for ophthalmologists?

**Dr Leonardo** Ophthalmology will have to face myopia eventually. Today, the most effective and the most useful weapon we have in our clinic is the Myopia Master. For colleagues who want to establish themselves in this new area gain effective control of this ailment and change how myopia is viewed, it is important to stop looking at myopia management as merely a 'simple refraction visit'. You have to understand myopia in the overall context. We recommend to get to know the Myopia Master. You will find several tools in its clever software that will give you ammunition to fight myopia for your patients.



