

INSTRUMENTS

My new gadget: the MYAH

Sarah Farrant tells of her experience using a new instrument aimed at assisting with myopia management as well as dry eye assessment

The launch of a new concept is always an exciting time for someone who thrives on gadgets. The prospect of opening the box and working out where in the practice to locate the shiny new machine always raises my excitement. Knowing that I am investing in my practice, my patients and myself is for me an essential part of who I am as a practitioner. Getting my hands on the MYAH from Topcon Healthcare (Tokyo, Japan) was one such moment.

The concept of the MYAH is simple: take the two most interesting specialisms currently receiving elevated levels of interest and provide a compact, succinct, fast and accurate device. It generates all the data you could need, and more, to provide specialised care.

MYOPIA MANAGEMENT

Unless you are self-isolating and have not been anywhere near a magazine or article in recent times, you will appreciate the air time myopia management is currently receiving. The ability to manipulate and control emerging myopia by reducing axial growth in a child used to be the stuff of dreams, especially for the myopes among us who know first-hand how every deteriorating dioptre counts.

Seeing the look of disappointment on a young patient's face when you would have to explain that their eyes had changed



yet again over the past few months and they needed stronger specs was always quite disheartening to me. In recent years, being able to discuss with them instead an opportunity for treatment to stem the tide has transformed those long remembered forlorn faces.

With the advent of the various approaches to myopia control now available, the ability to measure the goal posts and see the direct effect of the treatment protocols is more important than ever. Topography has become more mainstream in recent years with many contact lens labs ever willing to support practitioners to navigate contact lens fitting with the assistance of good topographical surface data. At the same time, myopia control does throw up some interesting issues regarding data gathering. If we are managing myopia by slowing the rate of axial elongation but are unable to measure it, are we truly able to appreciate, understand and optimise what we are doing? Until now, being able to





measure axial length with dedicated biometry devices was possible in practice, but difficult. MYAH has reset the standard by enabling practitioners to gather topographical and biometric data simultaneously, alongside a cutting-edge dry eye diagnostic platform.

The reporting system allows longitudinal analysis of axial elongation and entered refraction, including historical refractive data, to systematically review rates of change. It allows you to gather baseline data to monitor risk and helps you to start discussing myopia management with parents. The device also allows dynamic pupillometry measurement, which has uses not only in potential low dose atropine therapy, but also in Ortho-k fitting, multifocal lens centration and refractive surgery.

Additionally, the MYAH provides support for contact lenses, using the acquired topographical data to simulate contact lens fitting. The expected fit and fluorescein pattern from different lenses in the onboard database, or from added lenses, is shown. This process cuts down on the number of lenses that need to be trialled in a patient's eye, improving the clinic workflow and patient comfort.

DRY EYE DIAGNOSTICS

The importance of patient education in my dry eye clinic is integral to treatment success. Indeed, studies on compliance reveal the vital role of patient understanding and education has the biggest impact on optimising outcomes. I deliberately invest quality time during the appointment educating the patient regarding their condition, treatment plan and expectations. In doing so, they get a comprehensive understanding of what is involved and why, and what is likely to happen regarding future prognosis. I also have a trained front of house team who collaborate with me on patient education and understanding, to ultimately give the patients ownership of their condition and its management.



This all begins in the consulting room with good history and symptoms, questionnaires and data gathering. Being able to gather baseline data for a new patient is vital, allowing more accurate diagnosis and therefore more appropriate targeted management. For a returning patient under treatment, knowing the therapeutic effect of a particular management strategy on the data allows for a greater awareness of the current success of therapy.

The MYAH allows accurate data to be collected on non-invasive tear break up time, meibomian gland imaging with area of loss analysis and tear meniscus height measurements. It also features the ability to perform blink analysis, providing objective analysis of the blink characteristics of the individual. Imaging and video acquisition provide a tool for patient education as well as real fluorescein imaging. Corneal aberration degradation can be reviewed, allowing an understanding of how individual tear film dynamics influence vision. The reporting allows for visit-on-visit comparison to monitor the effect of therapy and allow more informed decisions when it comes to refining and adjusting treatment options.

As an integral part of my dry eye diagnostic work up, patients appreciate the technology when it allows you the ability to concisely and accurately talk them through the process of both diagnosis and explaining targeted therapeutic approaches.

Having the tools to facilitate accurate data gathering to enable us as practitioners to deliver informed, targeted management should be true for all aspects of the eye care we provide. The MYAH arms us as practitioners with the information we need to operate specialist myopia management and dry eye clinics, knowing we can offer the most evidenced-based approach to our patients. In return, we can achieve our ultimate aims as practitioners; to deliver the best outcomes we can for our patients.

Sarah Farrant is a therapeutic optometrist with a specialist interest in dry eye disease practising in Somerset, UK.

- For further information, go to www.topcon-medical.co.uk
- Look out for some case studies using the MYAH in the coming weeks