

Clinical & Refractive Optometry is pleased to present this continuing education (CE) article by Dr. Langis Michaud entitled **A Number of Small Things that Matter**. In order to obtain a 1-hour Council of Optometric Practitioner Education (COPE) approved CE credit, please click on the **Take Test** button on the Home Page and follow the on-screen instructions.

A Number of Small Things that Matter

Langis Michaud, OD, MSc, FAAO (Dipl)

ABSTRACT

This Case Report is about the importance of paying attention to details and never putting your brain on auto pilot. It is also about how important it is to return to basic concepts when it comes to addressing the patient's needs appropriately. In a busy practice, easy cases are sometimes looked at hastily and in "auto pilot" mode, and their details and hidden challenges may be dismissed too quickly for this reason. Remember, however, the devil is always in the details.

INTRODUCTION

It's Friday afternoon, almost 4:30 pm. It's been a busy week. Your last patient of the day is a young lady looking for a renewal of her annual supply of disposable contact lenses. You look at her chart: -1.75 and -2.75, Proclear® (CooperVision) contact lenses. You put your brain on automatic pilot and you think you're almost done. You're almost beginning to think about your pool and your BBQ. Almost ...because you begin to ask questions and a number of small things are emerging that disturb this perfect scenario. Too many small things, in fact, to not pay attention to them.

SUBJECTIVE

G.W. is a 30-year-old Caucasian female. She is a graduate student who does a lot of computer work and reading on a daily basis. She does not complain about ocular fatigue, asthenopia or headache. She is known to be a light myope, but for the past 10 years she has been followed by an ophthalmologist for a retinal detachment that occurred in

1992 secondary to severe posterior inflammation. Her general health is good but she reports transient allergic episodes related to dust and pollen exposure. Her family background includes spondylitis, but she has not been diagnosed with this condition. At the time of the visit she is not taking any medication and is not symptomatic of allergic reactions.

Ocular history reveals that she sees well with her glasses (OD -1.25 -0.75 x 55; OS -2.75 -0.25 x 150) which are her habitual mode of correction, worn mostly at far and very little at near. Contact lenses are worn on a part-time basis two days a week, mainly for outdoor activities and social events. She denies any discomfort with lenses on but when asked about her wearing schedule she states that she never exceeds six hours a day because she can't tolerate her lenses for a longer period of time. She previously tried comfort drops that did not produce any significant improvement of her condition. Consequently, she restrains her contact lens wear. Once indoors, she complains of halos and glare, especially in artificial lighting. What is surprising is that, considering all of these facts, she wants to renew her contact lens script as it is.

OBJECTIVE

Entering visual acuities with contact lenses on are 6/9 (20/30) OD, 6/4.5 (20/15) OS and OU. Retinoscopy provides a surprising +1.00/-1.00 x 60 OD and +1.25 OS over-refraction leading to 6/6 (20/20) visual acuity on both sides. Considering that the corrected right visual acuity is reduced, retinoscopy was repeated and the hyperopic over-refraction was confirmed. Slit lamp exam showed well-centered and mobile contact lenses with 0.2 mm movement upon blinking (BC of 8.20 for mean K's of 43.50 OU). There is no lag in any gaze. Ocular health assessment reveals light vessels congestion around the limbal area OU (grade 1). Upper and lower palpebral conjunctiva are free of hyperemia, follicles and papillae. Fluorescein did not show any staining.

These results revealed a lot of small things that are disturbing, mainly regarding the refractive findings. Based on these results, it was decided to proceed with cycloplegia and pupil dilation to more accurately assess

L. Michaud — Associate Professor, School of Optometry, Université de Montréal, Montreal, QC

Correspondence to: Dr. Langis Michaud, School of Optometry, Université de Montréal, 3744 Jean-Brillant, Suite 190-70, Montreal, QC H3T 1P1; E-mail: langis.michaud@umontreal.ca

The author has no financial or proprietary interest in the materials or products mentioned in this article.

refraction and to evaluate posterior segment ocular health. In adults, cycloplegia can be done effectively with instillation of tropicamide 1% drops in conjunction with phenylephrine 2.5% drops. Cyclopentolate is traditionally reserved to perform cycloplegia on younger patients.

Under cycloplegia, refractive findings were found to be OD -0.75 -0.75 x 60 [6/4.5 (20/15)] and OS -2.00 spherical [6/4.5 (20/15)]. Fundus were evaluated with BIO and the only abnormal finding was a pigmented lesion on the temporal inferior side of the right eye. This lesion was identified as a post-photocoagulation pigmentation surrounding the old detachment area that occurred almost 20 years ago. No leakage or any other detachment signs were visible. All other aspects of the retina were found to be within normal limits on both eyes.

ASSESSMENT

This patient presents with myopia and astigmatism, in addition to overcorrection. She also suffers from ocular dryness secondary to contact lens wear. Her ocular health status remains good and unchanged for the posterior segment compared with her last evaluation.

PLAN

For a young myope, it is not rare to be over-corrected, optically speaking. Everyone who works in a refractive surgery center will tell you that 80% of myopic patients are over-corrected. This might be due to the natural occurrence of over-accommodation that is seen in young patients, but most optometrists refract in dark rooms instead of under regular and natural lighting conditions. This leads to over-minusing every patient who is assessed under such conditions for a long enough time to let the pupil dilate. Frankly speaking, optometrists are guilty of over-correcting their patients because of their exam room environment. In most cases, their charts are not sufficiently contrasted to be seen in a regular lighting environment. Instead of changing their equipment or their screen, they prefer to over-minus every patient who enters their office.

When a patient is young, a -0.50 over-correction is not a big deal, but when patients reach their 30s or 40s, it can make a difference and trigger asthenopic symptoms. This does not apply in this case, most likely because the patient did not wear her visual correction for prolonged near tasks or computer work.

Based on our results under cycloplegia, over-correction with glasses was -0.50 OD and -0.75 -0.25 x 150 OS. With contact lenses, over-correction was -1.00 (spherical equivalent) and -0.75 -0.25 x 150 OS.

It is obvious that we have to reduce the power of both modes of correction but after having been over-corrected,

this is not an easy task, especially for an adult. The prescription should take into account the capacity of the optical system to decompensate and to relieve the ocular spasm that occurs with overcorrection. This is why a progressive approach is recommended.

In this case, the plan was to retrieve -0.50 both sides to begin with and to adjust the optical correction six months to a year later. The patient's contact lenses and glasses need to be changed according to the new prescription because both have to match in order to help the system decompensate appropriately.

To address the discomfort issue, we questioned the patient on her actual expectations. We asked if she would wear her contact lenses more often if we could fit lenses that could provide comfort for more than six hours per day. Considering that she does primarily work at near distance without correction, she did not want to wear contact lenses on a daily basis. She said she was afraid that wearing her lenses more often would negatively impact her ocular health, based on her traumatizing retinal experience. Taking that in account, daily disposable lenses become the lenses of choice for this patient. This type of lens also offers a good alternative in addressing dryness issues related to contact lens wear.

Considering the reduced level of visual acuity on the right eye with her previous contact lenses, it was decided to proceed with a toric contact lens fit for this eye. Nowadays, every patient with 0.75 D or more of refractive astigmatism should be given the newest generation toric lenses to try in order to compensate for their ametropia. The newest toric lenses are easy to fit and they provide very good visual acuity because they are stable. In most cases, they are also as comfortable as spherical lenses, making monocular fit of toric lenses easier than ever. We have to remember that correcting small amounts of astigmatism means a lot for patients over the age of 30, especially because the spherical equivalent negatively impacts binocular function. Additionally, it is a known fact that the main reason astigmatic patients drop out of contact lens wear is bad vision. Discomfort comes second for them.

Daily disposable lenses are available in three toric designs [Biomedics® (CooperVision), Dailies® torics (CIBAVision), and SofLens® daily torics (Bausch & Lomb)]. They are all available in several axes with toric power ranging from -0.75 up to -1.50. Therefore, there is no rational reason not to try them, even on a part-time astigmatic wearer, especially if we consider that Bausch & Lomb offers their toric lenses at the same price as spherical ones.

TRIALS

We did not have in hand a daily disposable near the axis 60 which was needed for the right eye. We decided to try

the same design in a monthly disposable lens to see if this type of lens could provide good vision and comfort. Air Optix® toric disposable lens (CIBAVision) (-1.00 -0.75 x 70) and Dailies® AquaComfort Plus® (CIBAVision) disposable spherical -2.00 were tried. After 10 minutes, the lenses were assessed with a slit lamp exam. The right lens was well centered and moved well, with a 10° rotation clockwise. Fortunately, this brought the axis to the expected position of 60°. The left lens showed limited movement, but no resistance on push-up. Retinoscopy and over-refraction gave +0.25 OD and plano OS for 6/6+2 (20/20+2) VA OD and 6/4.5 (20/15) OS.

We then decided to order a 30-day supply of disposable lenses. Additionally, the patient was instructed to change her glasses. The contact lens wearing schedule was modified to two days/week and more often if needed. The patient was instructed to discard her lenses after a single wear and she was given a sample of Blink Contacts® (Abbott Medical Optics) lubricating drops to use as needed. She will be seen in six weeks to see how she is handling her refractive change and how she is managing with contact lenses on a more regular basis. End of the day comfort will also be revisited.

CONCLUSION

Many small things emerged from this Case Report. The first is that very often, clinical findings do not match with

symptoms. The second is the importance of using retinoscopy to evaluate over-refraction in contact lens wearers and to have confidence in the results provided by this simple test. The third is to perform ocular examinations in appropriate lighting conditions in order to not over-minus our patients. The fourth is to perform cycloplegia in adults as required. Considering that more and more patients are dilated on a regular basis to assess their ocular health, it is advisable to check the refraction once the dilation is completed, before retinal assessment. This is quick and easy to do and can lead to better prescriptions for our patients who are over age 30. The fifth is to consider daily disposable lenses more often to address the visual needs of our contact lens wearers. It is easier to fit the lens while taking into account the lifestyle and activities of patients, instead of asking them to adapt their contact lenses to their lifestyle. The sixth relates to the importance of correcting small amounts of astigmatism with contact lenses, in order to improve visual acuity and binocular function.

Each of these elements can be considered a small thing. However, when they are put together, they matter, not only on a Friday afternoon but on a daily basis in a busy practice. They make the difference between a happy, well-corrected, comfortable contact lens wearer and a patient who, even if they are asymptomatic, is not appropriately visually corrected. □