Expert Interview  Myopia

Treatment of Myopia – Current Status and Recent Advances

An Expert Interview with Andrzej Grzybowski

Department of Ophthalmology, Poznań City Hospital, Poland; Department of Ophthalmology, University of Warmia and Mazury, Olsztyn, Poland

DOI: https://doi.org/10.17925/EOR.2017.11.02.85

Andrzej Grzybowski
Andrzej Grzybowski is Professor of Ophthalmology and Chair of Department of Ophthalmology, University of Warmia and Mazury, Olsztyn, Poland and Head of Institute for Research in Ophthalmology, Foundation for Ophthalmology Development, Poznan, Poland. He is active in international scientific societies including EURETINA (Co-opted Board member), the American Academy of Ophthalmology (AAO; International Fellow; member of the Global ONE Advisory Board and Museum of Vision’s Program Committee), the International Society of Bilateral Cataract Surgeons, the International Council of Ophthalmology (programme coordinator for the World Council of Ophthalmology from 2011 to 2018), Cogan Society, the European Association for Vision and Eye Research (EVER), the European Society of Cataract and Refractive Surgeons (ESCRS) (curator of ESCRSArchive), and representative of Poland at the International Society of Refractive Surgery International Council. He became a lifelong member (chair UK) of the European Academy of Ophthalmology and its Treasurer. He has organised sessions on myopia at major international ophthalmic meetings, EVER 2014, AAO 2016 and 2017, EURETINA 2017 and the World Congress of Paediatric Ophthalmology and Strabismus 2017. Andrzej Grzybowski is on the Editorial Board of several international medical, ophthalmic and historical journals, including Acta Ophthalmologica, Graefes’ Archive for Experimental and Clinical Ophthalmology, Translational Vision Science and Technology and Neuro-Ophthalmology. He has been an active editor, editor-in-chief and author of more than 350 peer-reviewed international publications (total impact factor higher than 700), and a reviewer for more than 20 journals.

The incidence of myopia is increasing and represents a major global economic and social burden. In addition to its disadvantages in terms of vision, myopia increases the risk of myopic macular degeneration, retinal detachment, glaucoma and cataract and is a leading cause of visual impairment and blindness worldwide. Pharmacological, environmental and optical interventions have been used to try to slow the progress of myopia. While spectacles and contact lenses have a long history in controlling accommodative responses, they do not slow progression. In an expert interview conducted at EURETINA 2017, Andrzej Grzybowski of the Institute for Research in Ophthalmology, Poznan, Poland discusses the current status of myopia and its treatment, as well as discussing new technologies aimed at delaying progression of the condition.

Q: Why has the prevalence of myopia increased so much in recent years?

The modern rise in myopia mirrors a trend for children in many countries spending more time engaged in reading, studying or glued to computers and smartphone screens. The evidence suggests that these environmental factors changes play a significant role, particularly in East and Southeast Asia. In some places, children cannot get enough outdoor light: there are too few hours of daylight, the sun is too fierce or the cold too intense.

Q: What have been the most important advances in non-surgical treatment for myopia in the last year?

High-dose atropine (1% and 0.5%), moderate-dose atropine (0.1%) and low-dose atropine (0.01%) showed clear effects in myopia control (all with statistically significant effect). With that the preliminary results of ongoing studies regarding the efficacy of pirenzepine, increased light exposure (e.g., using the Kurango study lamp) and 7-methylxantine are promising.

Q: What are the benefits and limitations of the use of atropine eye drops for the treatment of myopia?

High-dose atropine was proved to be superior to other interventions. The side-effects might include temporary stinging, blurred vision, pupil dilation and eye irritation, limiting a long-term application.

This leaves low-dose atropine, pirenzepine and soft contact lenses with myopia control features

Keywords
Myopia, atropine, pirenzepine, fluid misdirection syndrome, EURETINA

Disclosure: Andrzej Grzybowski has nothing to declare in relation to this article. This is an expert interview and as such has not undergone the journal’s standard peer review process.

Authorship: All named authors meet the International Committee of Medical Journal Editors (ICMJE) criteria for authorship of this manuscript, take responsibility for the integrity of the work as a whole, and have given final approval to the version to be published.

Open Access: This article is published under the Creative Commons Attribution Noncommercial License, which permits any non-commercial use, distribution, adaptation and reproduction provided the original author(s) and source are given appropriate credit.

Received: 24 November 2017
Published Online: 22 December 2017
Citation: European Ophthalmic Review, 2017;11(2):85-6
Corresponding Author: Andrzej Grzybowski, Department of Ophthalmology, Poznań City Hospital, 3 Szewańcza St, 36-1-285 Poznań, Poland. E: ae.grzybowski@gmail.com

Support: No funding was received in the publication of this article.
(for example, peripheral defocus modifying designs) as viable options for the active management of myopia progression. 10–12

Q: What is your opinion on the use of toric orthokeratology for the treatment of myopia?

The use of orthokeratology is limited by its complexity and cost. However, this treatment showed moderate effects for myopia control in several studies. 13,14

Q: Which presentations would you highlight from this year’s EURETINA meeting?

My highlight was the presentation regarding the fluid misdirection syndrome. In a recent review article we proposed a unified definition of this syndrome, known for almost 150 years as malignant glaucoma. 15 It might occur intraoperatively, however very few papers have been published on the topic. Anecdotally, most anterior segment surgeons report to have experienced such cases. 16

5. Chia A, Chua WH, Cheung YB, et al., Atropine for the treatment of childhood myopia: safety and efficacy of 0.01%, 0.1%, and 0.01% doses (Atropine for the Treatment of Myopia 2), Ophthalmology, 2012;119:47–54.