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SM Journal of Case Reports

Editorial

A New World for Pediatric Ophthalmology

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Article Information

Received date: Dec 01, 2015
Accepted date: Dec 01, 2015
Published date: Dec 02, 2015

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Editorial

The past decade has seen the change of habits in several cultures. Today, children spend more time in front of the TV or playing videogames than years ago. However, the changes experienced by these habits about near-activities over the past decade remain unprecedented. The use of mobile phone or tablet has achieved a principal role in children habits, not only to have fun, but also to study, even encouraged by teachers. It is clear that these devices provide a lot of information and a more attractive way to learn different signatures such as History or Natural Sciences. However, this change in daily routine might result in a change of strabismus pathologies of children, and ophthalmologists should be aware of it.

The effects of these changes might be the increase of myopia. In East and Southeast Asia, more than 80% of high school graduates now have myopia, and nearly 20% have high myopia (≤−6 diopters [D]) [1]. Also in Europe it is possible to see this trend [2]. In order to slow this rate, several studies have been published. Different attempts using corrective lenses and low-dose atropine eye drops have shown promising results. Progressive addition lenses caused a myopic shift in peripheral defocus and this effect may be associated with less central myopia progression in one year of follow-up [3]. The use of topical atropine 1% has shown to reduce the increase of myopia from -1.20±0.69 D in the placebo group to -0.28±0.92 in the atropine group in 2 years of follow-up [4]. However, side effects of this drop such as minimal pupil dilation, minimal loss of accommodation, allergic conjunctivitis and dermatitis have been published. Further studies using atropine 0.01% have shown not only lower side effects [5], but also a sustained effect [6], even in 5 years of follow-up (-1.38±0.98 D) [7].

Nevertheless, no need of any drop no progressive addition lenses might be needed to stop the epidemic of myopia in these areas. It is recently published that only one additional 40-minute class of outdoor activities per day significantly reduces the incidence rate of myopia over the next 3 years [8]. This study, carried out in China with 952 students, states that the group with more outdoor activities showed a progression of −1.42 D of their spherical equivalent, less than the control group (−1.59 D). So, Chinese population might be a flag to realize how important is to change again the habits, in order to spent more time with physical outdoor activities, taking into account the need of expensive treatment for its multiple sight-threatening pathological consequences, such as myopic macular degeneration [9].

On the other hand, children with Attention Deficit Hyperactivity Disorder (ADHD) might enhance their attention with new technologies. It is published a close relationship between ADHD and Intermittent Exotropia (IE) [10]. Interestingly, the improvement in IE with a single surgery is significantly related with better results in the rating scale IV, which is one method to measure ADHD clinical improvement. Moreover, medical treatment of ADHD has showed to improve the visual field results, due to the increased attention [11]. Moreover, new technologies might be very useful to treat children with ADHD. Home-based computer orthoptic program has showed good results in treatment of convergence insufficiency.

To summarize, new technologies are changing our habits and the pathologies of children in our countries. However, this new devices could be also the tools to treat them. Ophthalmologists should bear this in mind to better their patients [12].

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