

# EDITORIAL

## Progressive Myopia & Esophoria... The Right Thing to Do

**M**y foreword to the book *Accommodation, Nearwork and Myopia* by Ong and Ciuffreda included this first paragraph:

*There is perhaps no other topic that fascinates optometrists more than myopia. And, of equal fascination, at least to those who subscribe to a function-behavioral basis for visual problems, is the determination of its etiology. While genetic, nutritional, and psychological causes have been proposed and endured, the question of whether the complex of near work and accommodation is a, if not the major etiological component for myopia has increasingly gained stature. However, there are strong adherents to the pro and con sides of this question; indeed, discussions often become arguments and friendships have been modified because of differing opinions. It is certainly not a trite question, because the side one takes determines the treatment options offer to patients.<sup>1</sup>*

Recently a family care medical physician (Dr. X) called to ask my opinion. She lived in another state but had gotten my name from a third party. Her 10 year old child had an increase of myopia of 1.75 D, OU over a 2 year period. The child's ophthalmologist had prescribed the full prescription. When asked if there were measures to reduce or stabilize the condition, he stated that there was nothing

to be done. Dr. X, a myope herself, "did not want my child to go through what I did" and sought another opinion. This was in another ophthalmological office, but after she informed the practitioner of her reason for the examination, the child was scheduled to be seen by an optometric employee of the practice. The result of this examination was the recommendation for progressive addition lenses (PAL) to be worn constantly because of a moderate esophoria at near. Dr. X had heard of vision therapy and asked the optometrist if she felt that was a viable option for her child. The optometrist said that she had no problem with a second opinion and referred Dr. X to an optometrist who had credentials for this "speciality." After another evaluation the second optometrist stated that because of the esophoria and accommodative inflexibility, there was justification for visual therapy. She further recommended that rather than the PAL, an appropriate single vision prescription be used for concentrated near work, but did not rule out the possibility of PAL during the course or at the completion of therapy.

Dr. X's question to me was what would I do, and I added "if this were my child?" I asked several questions which resulted in the following answers: The child was a product of a full term pregnancy and normal delivery; aside from Dr. X, there was no significant history of myopia on either side of the child's family; the child was in good health and not taking medications; the child had al-

ways done quite well in school and was a precocious and avid reader. My recommendations were not exactly that of either of the examining optometrists: I recommended the PAL for constant use and vision therapy to improve accommodative facility and minimize the esophoria or its effect. Dr. X asked me to explain why four eye care practitioners gave different recommendations for something "as simple as nearsightedness."

I did not immediately answer. Here was a health care practitioner who might be able to provide some of her young patients with other than the "stronger and stronger lenses" option, and of at least equal importance, wanted to do the right

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thing for her child. I prefaced my answer by stating that, as with many instances in health care, there are differing opinions on the best course of action; that right and wrong are a function of each practitioner's philosophy, experience, careful reading of the research literature and thus deserve to be respected. However, I stated that in the case of myopia, as with, for example, glaucoma and hypertension, the literature is not definitive and is often contradictory. We know these entities exist, are cognizant that they are complex, and our understanding of the underlying mechanisms are not completely understood. Thus, the opinion of optimal treatment for progressive myopia can vary.

Dr. X thanked me and asked if I'd suggest some of the literature for her to read. I sent her a copy of the Ong and Ciuffreda book along with a copy of a chapter by Sherman and Press.<sup>2</sup> This latter piece is a well balanced and informative discussion of myopia. It focuses on the esophoria connection, which is pertinent in this case, and is an easier read, although of necessity isn't as comprehensive as the former.

The above scenario portrays the dilemma that can result when parents seek an additional opinion about their children's myopia. Thus, three optometrists were convinced that preventative measures were feasible on the basis of the esophoria, while one ophthalmologist either didn't find it, or chose to ignore it. While not every optometrist would recommend further intervention, and not every ophthalmologist would ignore its possibility, I believe the above recommendations vis a vis ophthalmology and optometry are representative of what parents will generally be advised to do.

The literature on the esophoria/accommodative relationship in progressive myopia is voluminous as evidenced by the above cited Ong and Ciuffreda book and a subsequent review by Goss and Zhai.<sup>3</sup> On the basis of these reviews there has been a compelling and growing body of evidence that the "right thing to do" in progressive myopia with esophoria is to provide plus for near. Additionally, it appears that at least some recent researchers of the myopia/esophoria connection have expressed their opinions on the subject. For exam-

ple, Brown and Edwards, in responding to a letter to the editor by George W. Fulk, another researcher of the myopia/esophoria connection stated:

*However, in the light of accumulated evidence (some of which Dr. Fulk has summarized), we feel that the practitioner, when faced with a patient with progressive, esophoric, myopia, has sufficient basis to consider the clinical option of using a bifocal or progressive lens correction in an attempt to slow the progression of the patient's myopia.<sup>4</sup>*

The above statement is particularly noteworthy. My impression is that good researchers often raise more questions than provide answers. Further, they are understandably reticent about making statements about the clinical applicability of their results, and this is as it should be: quality research where all variables can't be totally controlled is difficult to carry out. Further, as McMonnies has pointed out, the significance or lack of statistical significance of research results is not always in accord with what is or isn't clinically significant.<sup>5</sup> On the other hand, clinicians must be able to make timely decisions and provide a rationale for these decisions to themselves and their patients. The above Brown and Edwards quotation indicates an instance of sound guidance provided by researchers for clinicians. It, and the research upon which it based give informed optometrists and ophthalmologists the rationale and evidence to prescribe plus where there is near esophoria and progressive myopia; it is the right thing to do.

Aside from a thank you note enclosed in a basket of fruit, I have not heard further from Dr. X. But I believe I did the right thing.

## References

1. Ong E, Ciuffreda KJ. Accommodation, Nearwork and Myopia. Santa Ana, CA: Optom Ext Prog 1993:v.
2. Sherman A, Press LJ. Myopia control: taming the refractive beast. In: Press LJ Applied Concepts in Vision Therapy. St. Louis: Mosby 1997:180-87.
3. Goss DA, Zhai H. Clinical and laboratory investigations of the relationship of accommodation and convergence function with refractive error. A literature review. Doc Ophthalmol 1994;86(4):349-80.
4. Brown B, Edwards MH. Author's Response. Optom and Vis Sci 2003; 80 (3):190.
5. McMonnies CW. Thoughts on the research of the reading/vision association. J Behav Opt 2002;13 (6):153.