Bifocals may slow progression of nearsightedness in children

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Bifocal glasses may be effective in slowing the progression of myopia (nearsightedness) in children with high rates of progression, according to a report in the January issue of *Archives of Ophthalmology*.

Myopia is a common problem among children in many areas of the world, with prevalence as high as 50 percent to 60 percent by age 12 in East Asian countries, according to background information in the article. Prevalence is also high among Asian children living in Western countries. Bifocals -- glasses with two different corrective powers -- and multifocals have been tested as treatments for myopia in children with relatively ineffective results.

Desmond Cheng, O.D., M.Sc., Ph.D., then of the Queensland University of Technology, Brisbaine, Australia, and now of Hong Kong Polytechnic University, Hong Kong, and colleagues conducted a randomized controlled clinical trial among 135 Chinese Canadian children (average age 10.3) in one practice with progressing myopia. Participating children were assigned to one of three treatment groups: 41 wore single-vision lenses, 48 wore bifocals and 46 wore bifocals with prism, which helps the eyes work together.

Of the 135 children, 131 completed the 24-month study. Progression of myopia was most rapid among those who wore single-focus lenses, slower among those who wore bifocals and slowest among those who wore prismatic bifocals.

Because the fundamental characteristics of myopia likely do not vary by ethnic group, the results would likely apply to other children with rapidly progressing forms of the condition, the authors note.

"The proportion of myopic children in this practice with fast myopic progression, therefore qualifying for bifocal treatment, was estimated to be about 54 percent," the authors write. "Therefore, the bifocal treatment could benefit a large number of myopic children."

"To date, there has been no consensus on what magnitude of myopic reduction constitutes a clinically significant control effect," they conclude. "In our opinion, the treatment effect of bifocal and prismatic bifocal lenses of 38 percent and 55 percent, respectively, in this study, though greater than those of others, is still modest. Whether or not the effect tapers off will decide clinical significance. If the treatment effects continued over time, then the treatment could have a significant role in preventing the development of very high pathologic myopia." Therefore, long-term studies are needed, they note.

More information: Arch Ophthalmol. 2010;128[1]:12-19.

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