



EDITORIAL

The Use of Low Plus Lenses — Resolving the Dilemma?

At one annual mid-winter educational Congress of the Ontario Association of Optometrists, held in Windsor in 1954, one of the guest speakers, Dr. Leo Manas, a faculty member of the Illinois College of Optometry, stated that, "if children of school age were to use a pair of plus spheres of modest power, fewer children would develop reading problems and gross refractive and sensory and oculo-motor problems." This statement, as were many others put forward by OEP proponents, was based on empirical clinical experience. Scientific proof was not then available to substantiate the Manas statement.

The media of the day, supported by some members of the medical profession, jumped on this statement to berate optometrists and to reiterate the accusation that optometrists were not professionals, but mere "spec peddlars" if not outright frauds. Even orthodox practitioners in Optometry were dumbfounded and somewhat angered by this statement and its negative effect on the profession's image.

Since that date, clinical observations continue to be made and reported. When electrophysiological or electrodiagnostic procedures became available, however rudimentary, some attempts were made to investigate the neurological effects of visual tasks with and without the use of ophthalmic lenses. These first findings did indicate the effect of lenses on the electrical activities of the cortical centres involved. That these effects were beneficial was a question to remain unanswered until more sophisticated testing procedures were evolved. Controversy followed with, perhaps, the negative aspect prevailing but it did stimulate thought and research into the subject.

Progress in electrodiagnostic techniques has confirmed the value of such procedures in the investigation of many physiological functions, including the ocular. The ERG, EOG, EEG and the VER are just some of the procedures related to the investigation of visual function. However, for the purposes of this discussion, only the VER has a direct application. *The VER permits the differentiation of those patients who fulfill the Manas statement from those who would show no positive reaction at the cortical level to the application of this procedure.* In essence, this electrodiagnostic technique provides supportive evidence for clinical observations reported thirty years ago!

Examples of this evolution from observation to scientific proof abound in the biological and behavioural sciences. Pasteur and Lister, to name but two, were jeered at by their contemporaries, but their theories were shown by subsequent research to have been correct. In our own profession, one does not have to go back very far to read arguments against contact lenses. Yet today, who in Optometry would question their value?

More recently, in Canada, the electrodiagnostic laboratory at the School of Optometry, University of Waterloo, has been adding to the evidence accumulated so far. Papers by Lovasik and Strong, Lovasik and Woodruff and by Spafford, Lovasik and Holtern are providing evidence that the Manas statement had credibility.

All optometrists, after a few years in practice, have accumulated files indicating successful and unsuccessful uses of modest amounts of plus lens powers on some children afflicted with learning or reading problems. VER is showing itself useful in differentiating those children who would benefit from the application of low plus spheres from those where equal amounts of low plus lens powers has no enhancement effects whatsoever. It would seem that the test should be more routinely used with children demonstrating educational problems.

Presently, the distribution of electrodiagnostic equipment is limited and costs of transportation to and from the available centres, plus the cost of the service, restricts its application to a limited number of families. Perhaps the cost of such service should be a benefit under health care plans. School boards should assume the transportation costs, because society as a whole would gain from the rehabilitation of these children as future health and educational costs are reduced, if not eliminated, by such rehabilitation.

Pending the arrival of such a millenium, the alert and prudent practitioner must rely on less sophisticated procedures. This would include a thorough assessment of accommodative amplitude, its dynamic facility, vergence amplitudes, the presence of suppression, the phoria status. Additional support could come from the careful testing by dynamic retinoscopy (Bell or MEM), fused binocular cross cylinder tests, stereopsis findings, fixation disparity, aniseikonia, cheirosopic tracings and other near point binocular tests. Following such a

thorough investigation, it may be appropriate for the practitioner to supply on a trial basis a spectacle of modest plus power for a trial period of 10 to 14 days to evaluate the value of such lenses on a particular child. Because some patients may not manifest a significant abnormality on many of the tests due to their short duration, the diagnostic plus lens test may be the ultimate determinant of the need for plus. (We could interject at this time, because of its relevance to this discussion, that the eye care professions should direct their attention to the development of some test or procedure, be it electrophysiological or otherwise, to measure the effort in convergence and accommodation functions.) If the effect is positive, the practitioner can be reasonably assured that a pair of prescribed spectacles will assist that particular child.

The prescribing of any therapeutic device or drug should not be on the basis of its strength or power, but on the effect it has on the patient's usual performance. If *careful assessment* indicates possible benefit to the patient, then good vision care indicates the use of plus spheres of modest power.

GMB

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