COMPARISON OF MEM RETINOSCOPY & NOTT RETINOSCOPY & THEIR INTEREXAMINER REPEATABILITIES

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Abstract

The results of previous studies comparing Monocular Estimate Method (MEM) retinoscopy and Nott retinoscopy (Nott) have not been consistent. The purposes of this study were to compare MEM and Nott measures of accommodative response with each other and to provide data on the interexaminer reliability of MEM and Nott. Two examiners performed both MEM and Nott retinoscopy on 50 young adult subjects, using a 40 cm testing distance. Measurements of accommodative response were also taken with a Canon Autoref R-1 (Canon) autorefractor.

The mean difference between MEM and Nott was 0.0002 ±0.55 D. The 95% limits of agreement between the two examiners were ±0.17 D on Nott retinoscopy and ±0.31 D on MEM retinoscopy.

The results of this study indicated close agreement of the means for MEM and Nott. However, there was a wider range of measurements with MEM retinoscopy than with Nott retinoscopy. Nott showed better agreement with MEM at mid range responses than at low or high responses. Lags measured with Nott were lower than the lags found with MEM in high lag subjects. The agreement between examiners on both dynamic retinoscopy techniques was better than the agreement between methods.

Key Words

accommodation, accommodative response, auto refractor, dynamic retinoscopy, lag of accommodation, MEM retinoscopy, Nott retinoscopy

INTRODUCTION

Determination of accommodative response (AR) is an integral part of the comprehensive evaluation of accommodative function. Dynamic retinoscopy is a standard clinical procedure used in the assessment of accommodative response. Two common dynamic retinoscopy techniques are the Monocular Estimate Method retinoscopy (MEM) and Nott retinoscopy (Nott).[1]

PREVIOUS LITERATURE

Comparison of MEM and Nott to instrument measures of AR

The ARs measured with both methods have been shown to be in close agreement with non-retinoscopic measures.[2-4] Rouse et al.[2] found very high correlations of AR measured with MEM and AR measured with a phoroaccommodometer (r = 0.98) for accommodative stimuli ranging from 0 to 5 D. Rouse et al. found the differences between AR with MEM and AR with the phoroaccommodometer to be no more than 0.37 D for accommodative stimuli up to 4.25 D. With 24 young adult subjects and a 2.5 D accommodative stimulus, Rosenfield et al.[3] found a mean difference of only 0.02 D (SD = 0.33) between AR measured with Nott, and AR measured with the Canon Autoref R-1 autorefractor, which has an open field for viewing nearpoint targets. McClelland and Saunders[4] measured lag of accommodation (accommodative stimulus minus AR) with Nott retinoscopy and with a Shin-Nippon SRW5000 autorefractor which has a window for viewing at varying distances. For a viewing distance of 25 cm, the mean difference between the two was 0.06 D (SD = 0.51).

Comparison of MEM with Nott

There is no a priori reason to expect differences in AR measurements with MEM and Nott method if test targets, distances, and other testing conditions are the same. Locke and Somers[5] found no significant difference between MEM and Nott findings. Mean lag with MEM was 0.50 D (SD = 0.16) for examiner A and 0.50 D (SD = 0.18) for examiner B. Mean lag with Nott retinoscopy was 0.56 D (SD = 0.19) for examiner A and 0.64 D (SD = 0.08) for examiner B.[5] Jackson and Goss[6] found close agreement in findings with MEM and Nott methods on 244 school-age children.

However, Cacho et al.[7] and García and Cacho[8] reported significantly different results with MEM and Nott procedures. In the first paper[7] their subjects were 50 university students. A complete optometric examination was conducted to rule out accommodation and vergence disorders. The subjects wore their subjective refractions and the mean lags of accommodation were 0.74 D (SD = 0.72) with MEM and 0.42 D (SD = 0.41) with Nott. The coefficient of correlation of MEM lag with Nott lag was r = 0.94. In their second paper,[8] they studied 34 patients with accommodative and binocular disorders. Again, there was a high correlation of MEM and Nott lags (r = 0.90). The mean lags were significantly different ($p < 0.05$): 0.32 D with MEM and 0.20 D with Nott. The mean difference was thus 0.12 D (SD = 0.27). In their first paper, Nott retinoscopy was done before MEM retinoscopy due to the theoretical possibility that the lenses in MEM retinoscopy could affect the accommodative response. In their second paper, the order of Nott and MEM retinoscopies was randomized.

Mean lags of accommodation

The mean lag of accommodation in various studies has varied from about 0.25 to 0.75 D for the typical test distance of 40 cm. Rouse et al.[9] found a mean MEM lag of 0.34 D in school children. Jackson and Goss[6] found a mean MEM lag of 0.23 D in school children. Tassinari[10] found a mean MEM lag of 0.35 D (SD = 0.34) in 211 children and young adults. Penisten et al.[11] reported a mean MEM lag equal to 0.77 D using a print test card at 50 cm with young adult subjects. Haynes[12] gave an average value of 0.62 D for MEM lag. Lags are greater when closer test distances are used.[13]

PURPOSES OF THIS PAPER

Although studies have shown both MEM[2] and Nott[3,4] to be in close agreement with non-retinoscopic measures of AR, the results of studies comparing MEM and Nott have been inconsistent. Locke and Somers[5] found no significant difference between MEM and Nott. Cacho et al.[7] found 0.32 greater lag with MEM. García and Cacho[8] found a small but statistically significant difference between the two.

The purposes of this paper are:

To examine the difference between MEM and Nott by comparing the results of MEM and Nott to each other and to an objective autorefractor measure of accommodative response.

To present inter-examiner repeatability data for the MEM and Nott procedures.

SUBJECTS

This study was performed with 50 subjects from the Indiana University School of Optometry student population, and some faculty and staff. The 15 male and 35 female subjects were between the ages of 20 and 35 years (average age, 24.8 years), had no strabismus as determined by distant and near cover testing, and had best corrected distance visual acuity of at least 20/25 in each eye with contact lenses or spectacles. It was assumed that no ocular pathology was present based on the visual acuity and self report of the subjects. The Indiana University Human Subjects Committee approved this study prior to any testing being performed.

METHODS

For each of the three tests, MEM, Nott, Canon Autoref R-1[a] (Canon), the subjects were situated comfortably using the chin rest and forehead rest of the Canon. A clinical nearpoint test card was placed at 40 cm from the spectacle plane. The card was clamped to a metal rod which, in turn, was clamped to the autorefractor table. The card remained in place for all testing procedures.

The 40 cm test distance is commonly used in dynamic retinoscopy and is recommended by several authors.[1,14,15] The subjects wore their spectacles or contact lenses, viewed the card binocularly and read the 20/20 letters while the measurements were performed on the right eye.

Two examiners performed the testing. This was done in a three step manner:

(1) Simultaneous measurements were done with Nott and the Canon. On odd numbered subjects, examiner one took ten Canon readings on a subject while examiner two performed Nott. On even numbered subjects, examiner two operated the Canon while examiner one performed Nott. The examiner operating the Canon was situated such that the other examiner doing Nott could not be observed.
(2) The examiner who operated the Canon then performed Nott.
(3) MEM was performed by each examiner, without results being compared.

Thus both examiners performed MEM and Nott on all subjects. Nott retinoscopy was performed before MEM as in the Cacho et al. study.[7] A streak retinoscope was used for MEM and Nott.

The Canon yields readings in standard sphere, cylinder, axis format. The amount of minus in the spherical equivalent of the reading was used as a measure of AR. The first ten sphere values from the Canon were used unless a measurement which differed by more than two diopters from the lowest minus power sphere reading of the ten was obtained. Measurements falling outside of the two diopter difference were eliminated, and more Canon measurements were taken in order to obtain ten useable estimates of AR. Calibration of the Canon was checked by comparing the spherical equivalent of measurements on one eye of an absolute presbyope during distance fixation to that individual's subjective refraction. The spherical equivalent of the subjective refraction was -3.12 D. The average of the spherical equivalents of ten Canon measurements was -3.19 D (SD = 0.24).

For Nott, the examiner moved the retinoscope away from the subject until a neutral reflex was seen. The distance of the retinoscope from the subject's spectacle plane was measured in meters using a fixed meter stick. The reciprocal of that distance in meters gave the AR in diopters.

For MEM, the accuracy of the estimate of the lag of accommodation was tested by briefly (generally less than one second) placing a plus lens with power equal to the magnitude of the estimate of the lag in front of the subject's eye and noting whether a neutral motion reflex was observed. If neutral motion was not observed, the estimate was revised and again checked with another plus lens. The lag of accommodation thus determined by MEM was subtracted from the accommodative stimulus (2.50 D) to obtain an MEM AR value for comparison to the AR as measured by Nott retinoscopy and the Canon.

Comparison of results for the different methods was done with paired t-tests and correlation coefficients, as well as by finding the mean and standard deviations of the differences between the tests. The 95% limits of agreement were determined by multiplying the standard deviation of the differences by ± 1.96. Altman and Bland[16] have noted that assessment of the agreement of clinical measurements should also consider whether the difference between measurements changes as the mean of the measurements increases or decreases. This was done by calculating the correlation coefficients of the differences between two methods with means of the values from those two methods.[16] Inter-examiner reliability was examined by finding the mean and standard deviation of the difference of the results between the two examiners and multiplying the standard deviation of the differences by ±1.96 to determine the 95% limits of agreement between the examiners.

RESULTS

As shown in Table 1, the mean accommodative responses on MEM by each examiner and on Nott by each examiner were all between 1.57 and 1.66 D. The standard deviations for MEM were about 0.4 D, while the standard deviations for Nott were 0.2 D.

Comparison of MEM and Nott to Canon

As shown in Table 2, the difference between the Canon spherical equivalent and the MEM findings, averaged between the two examiners, was 0.51 D (SD = 0.42). The difference between the Canon spherical equivalent and the Nott findings averaged between the two examiners was 0.51 D (SD = 0.30). Scatterplots comparing Nott and MEM to Canon are shown in Figures 1 and 2, respectively.

As can be seen in Figure 1, there was less variability in Nott AR than in Canon AR. The range for Nott was 1.12 to 2.02 D, while the range for Canon was 0.80 to 2.79 D. The 95% limits of agreement for Nott and Canon, found by multiplying the standard deviation of the differences between them by 1.96, was ±0.59 D, or -0.08 to +1.09 D. The Pearson coefficient of correlation of Nott AR with Canon AR was r = 0.53, which was significant at the 0.001 level. The correlation coefficient of the average of the Canon and Nott findings with the difference between them was r = 0.57, which was statistically significant ($p<0.001$). This indicates that the difference between the two measurements varies as a function of the magnitude of the AR. As can be observed in Figure 1, the Nott AR was less than the Canon at high ARs.

The mean difference of Canon spherical equivalent AR minus MEM AR averaged for the two examiners was 0.51 D (SD = 0.42). A scatterplot showing the results on MEM and Canon is shown in Figure 2. There was more scatter in Figure 2 than in the comparison of Nott and Canon, as reflected in the greater 95% limits of agreement of ±0.82 for MEM and Canon. The Pearson coefficient of correlation of MEM AR with Canon AR was r = 0.34. This correlation coefficient was statistically significant ($p<0.02$), but the r^2 of 0.12 shows that the two values share only 12% of the variability in findings. The correlation coefficient of the average of the MEM and Canon findings with the difference between them was r = 0.09, which was not statistically significant ($p>0.5$).

The analyses reported here used the spherical equivalent on the Canon because

Table 1. Mean accommodative response and standard deviation for each test. Units are diopters.

	Mean	Standard deviation
Canon	2.13	0.35
Nott, Examiner 1	1.63	0.20
Nott, Examiner 2	1.60	0.20
MEM, Examiner 1	1.57	0.40
MEM, Examiner 2	1.65	0.37

Table 2. Comparison of accommodative response measurements expressed as a mean difference, standard deviation of the differences, and the 95% limits of agreement. Units are diopters. Ex= Examiner

Comparison	Mean difference	Standard deviation of differences	95% limits of agreement
Canon – Nott, Ex. 1	0.50	0.30	±0.59
Canon – Nott, Ex. 2	0.53	0.30	±0.59
Canon – Nott average	0.51	0.30	±0.59
Canon – MEM, Ex. 1	0.56	0.43	±0.84
Canon – MEM, Ex. 2	0.47	0.42	±0.82
Canon – MEM aveerage	0.51	0.42	±0.82
MEM average – Nott average	0.0002	0.28	±0.55
MEM, Ex. 1 – Nott, Ex. 2	-0.03	0.30	±0.59
MEM, Ex. 2 – Nott, Ex. 1	0.03	0.29	±0.57
MEM, Ex. 1 – Nott, Ex. 1	-0.06	0.31	±0.61
MEM, Ex. 2 – Nott, Ex. 2	0.06	0.28	±0.55

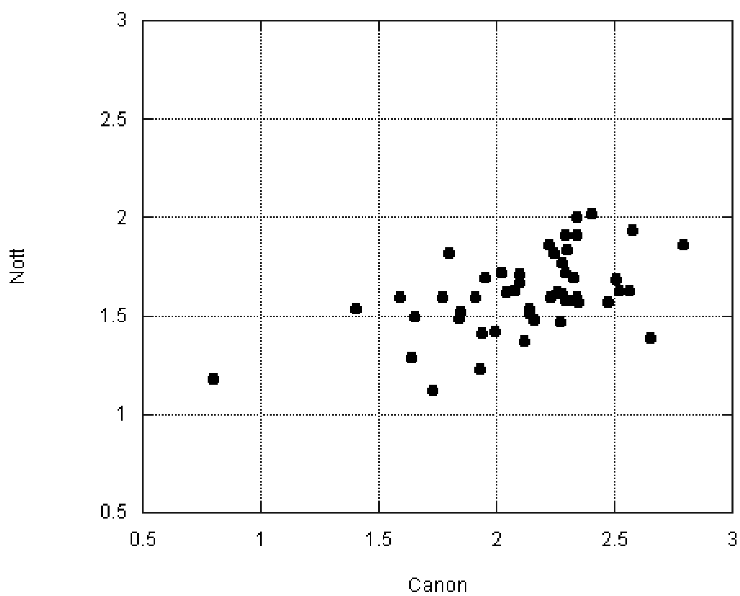

Figure 1. Scatterplot of Nott retinoscopy accommodative response with Canon autorefractor accommodative response. The Nott values are averages of the findings for each subject from the two examiners.

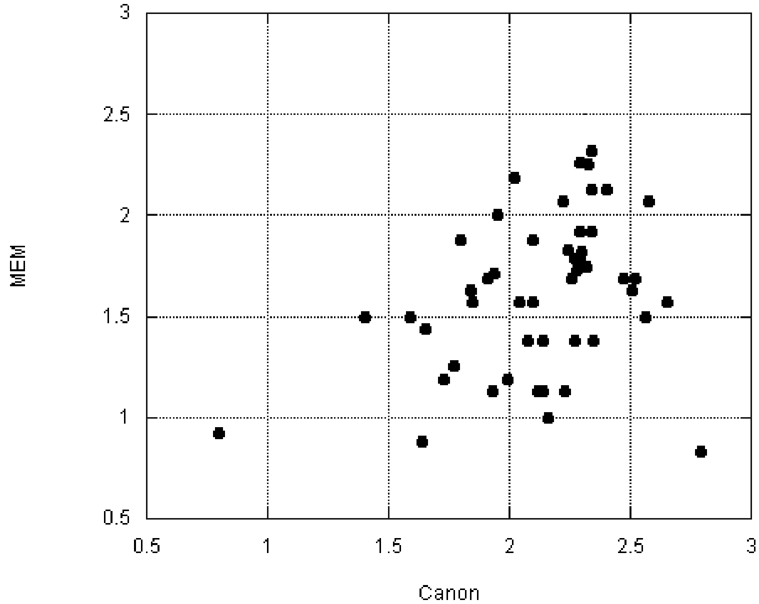

Figure 2. Scatterplot of MEM retinoscopy accommodative response with Canon autorefractor accommodative response. The MEM values are averages of the findings for each subject from the two examiners.

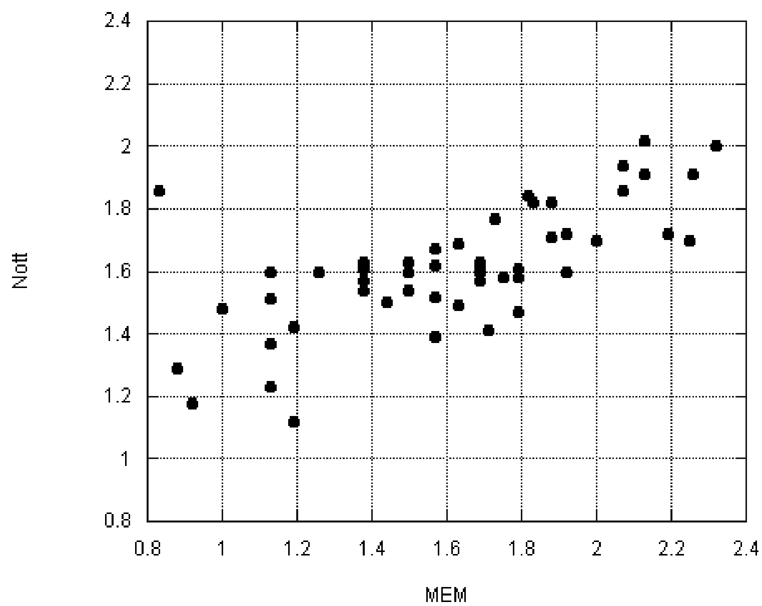

Figure 3. Scatterplot of Nott retinoscopy accommodative response with MEM retinoscopy accommodative response.

Table 3. Interexaminer reliability of Nott and MEM retinoscopy expressed as a mean difference, standard deviation of the differences, and the 95% limits of agreement. Units are diopters.			
	Mean difference	Standard deviation of the differences	95% limits of agreement
Nott	0.03	0.09	±0.17
MEM	-0.09	0.16	±0.31

that has become the standard way of determining accommodative response in research work with the Canon. However, it is interesting to note that the sphere value from the Canon reading averaged very close to the MEM and Nott findings. The mean of the Canon sphere minus Nott averaged for the two examiners 0.04 D (SD = 0.32). The mean of the Canon sphere minus MEM averaged for the two examiners 0.04 D (SD = 0.41).

Comparison of Nott to MEM

The mean difference for MEM minus Nott was -0.0002 D (SD = 0.28). MEM and Nott were not significantly different by paired t-test (p = 0.996). A scatterplot comparing Nott and MEM results is shown in Figure 3. There was less variability in the Nott measurements than in the MEM results. The range of MEM AR was 0.83 to 2.32 D. The range of Nott AR was 1.12 to 2.02 D. The 95% limits of agreement for Nott and MEM was ±0.55 D. The Pearson coefficient of correlation of Nott with MEM AR was r = 0.69 ($p<0.0001$). The correlation coefficient of the average of the MEM and Nott ARs with the difference between them was r = 0.70 ($p<0.0001$). This correlation can be observed by noting in Figure 3 that at low AR levels, the Nott accommodative response findings were greater than the MEM findings, and that at high AR levels, Nott response findings were less than MEM measurements. This is reflected in the narrower range of findings with Nott retinoscopy.

Interexaminer repeatability of MEM and Nott

Interexaminer repeatability data are given in Table 3 and Figures 4 and 5. The mean difference between examiners on Nott retinoscopy was 0.03 D (SD = 0.09), and the difference for MEM was -0.09 D (SD = 0.16). The 95% limits of agreement for interexaminer reliability, found by multiplying the standard deviation of the differences between examiners by 1.96, was ±0.17 D for Nott and ±0.31 D for MEM.

DISCUSSION

Comparison of MEM and Nott

The present study found close agreement of average MEM AR and average Nott AR. That finding is consistent with Locke and Somers[5] who reported that the results produced by MEM and Nott were not significantly different. However, Cacho et al.[7] and García and Cacho[8] found significantly greater lags of accommodation with MEM than with Nott. Table 4 summarizes the difference in lag of accommodation found with MEM and Nott in the four studies. In three of the four

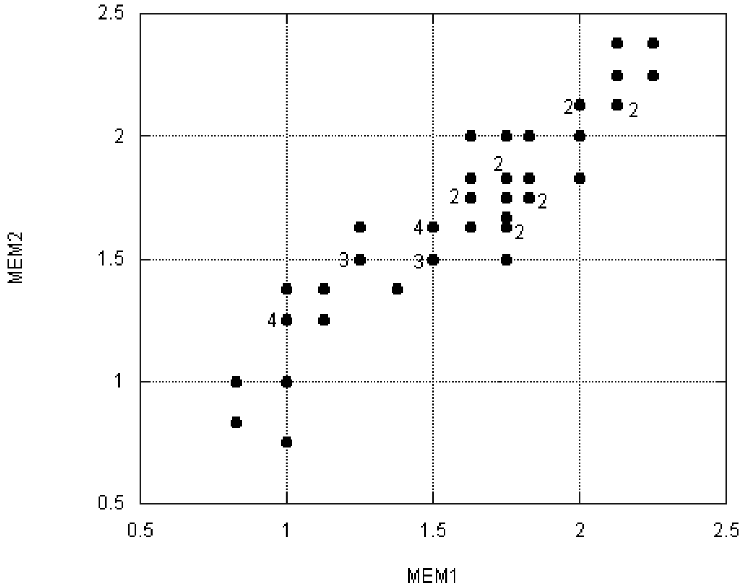

Figure 4. Scatterplot comparing accommodative responses by the two examiners with MEM retinoscopy. Numerals indicate points where there were multiple superimposed points.

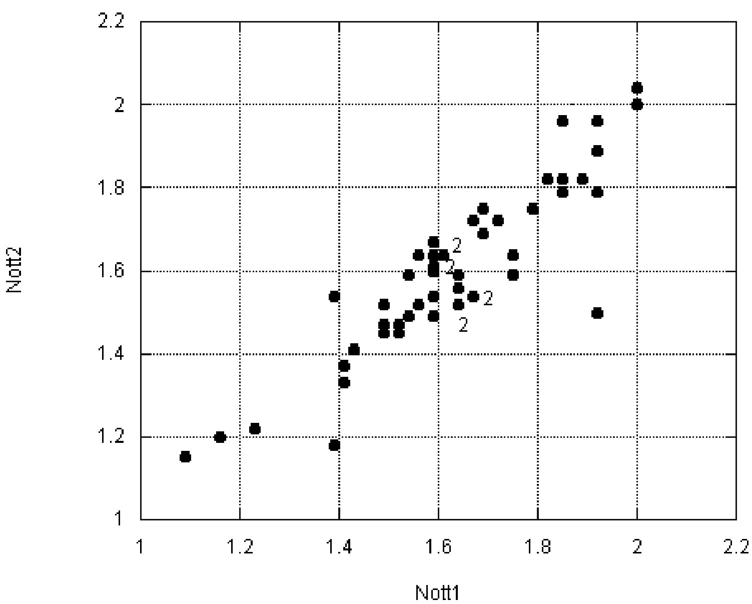

Figure 5. Scatterplot comparing accommodative responses by the two examiners with Nott retinoscopy. Numerals indicate points where there were multiple superimposed points.

Table 4. Difference in MEM and Nott retinoscopy findings in diopters, given as the MEM lag minus the Nott lag, in four studies.			
Study	Mean difference	Standard deviation of the differences	95% limits of agreement
Somers and Locke[5]	-0.10	0.11	±0.22
Cacho et al.[7]	0.32	0.36	±0.71
García and Cacho[8]	0.12	0.27	±0.53
Present study	0.0002	0.28	±0.55

studies there is less than an eighth of a diopter difference between MEM and Nott.

Cacho et al.[7] suggested that the reason they found a greater lag on MEM than on Nott was "probably because of the effect of the supplementary lenses." The standard procedure on MEM retinoscopy involves the examiner estimating the lag of accommodation by observing the brightness, speed, and width of the retinoscopic reflex. A verifying lens equal in power to the estimate can then be very briefly interposed to see if it neutralizes the retinoscopic reflex. The lens should be in place only long enough for the examiner to judge whether neutrality is present and not long enough to significantly affect the accommodative response.[1,2,14,15,17-21]

Different sources vary with regard to the time they suggest the lenses should be in place. The average latency for an accommodative response is 370 msec, and the average total response time including the latency and change in crystalline lens power is about one second.[22] That suggests that any verifying lenses used for MEM retinoscopy should be in place for only a fraction of a second. One suggestion that appears to be reasonable is that a given trial lens should be in place no longer than one second and that a minimum of three seconds should pass before that or another trial lens is again placed in front of the patient.[23] Cacho et al.[7] stated that "lenses were briefly introduced by the examiner," but did not indicate how long they remained in front of the patient.

The 95% limits of agreement for MEM and Nott in Table 4 suggest that the two dynamic retinoscopy procedures will usually give values within about a half diopter of each other. They are more likely to differ at higher or lower response levels, with Nott showing a narrower range of findings than MEM.

The narrower range of Nott findings than of MEM findings is mostly consistent with previous studies. In the Locke and Somers study,[5] the range of findings for Examiner A was about the same on both Nott and MEM, but for Examiner B, the range of lags was 0.12 to 0.75 D with MEM and 0.52 to 0.83 D with Nott. In the Cacho et al. study,[7] the ranges of lags were -0.50 (lead) to 2.25 D on MEM and about -0.4 to 1.25 D on Nott retinsocopy, and the standard deviations were 0.72 D on MEM and 0.41 D on Nott. In the García and Cacho study,[8] the ranges of lags were -0.75 to 1.25 D with MEM and about -0.4 to 0.9 D with Nott, and the standard deviations for right eye measurements were 0.52 D with MEM and 0.33 D with Nott.

The results of the present study and the previous studies indicate that measurements of lag of accommodation will be lower with Nott than with MEM retinoscopy in high lag cases. That suggests that different guidelines for conversion of lag into a recommended add may be appropriate for the two dynamic retinoscopy methods in accommodative insufficiency cases. One approach to derive an add is to subtract some given dioptric amount from the lag.[17] Take, for example, an add derived by subtraction of 0.25 D from the lag for cases where the lag is greater than 1.00 D. We can apply that guideline to the MEM and Nott data in Figure 3. There would be two cases in the present study where MEM would indicate an add of 1.50 D; Nott would indicate an add of 1.00 D on one of those subjects and no add on the other where the Nott lag was less than 1.00 D. There would be eight cases where a 1.25 D add would be recommended based on application of that rule to MEM; based on Nott, six of those subjects would receive a 0.75 D add, one a 1.00 D add, and one a 1.25 D add. There would be five subjects with a 1.00 D add from MEM; Nott would recommend a 0.75 D add for four of those five and no add for the other. Five subjects would have a 0.75 D add recommended by MEM, all five of whom would also have a 0.75 D add recommended by Nott. Because the AR values on MEM and Nott are close to the same when the lag is low, application of a rule such as Birnbaum's recommendation[14] to add plus until the lag is reduced to the 0.12 to 0.50 D range would seem likely to yield similar add values on MEM and Nott.

Comparison of MEM and Nott to other measures of AR

Rouse et al.[2] found a very high correlation of MEM with an instrumental measurement of accommodation ($r = 0.98$) for a wide range of accommodative stimuli on a small group of subjects. When using the spherical equivalent from the Canon, as is usually done in research work, the Canon AR averaged about a half diopter higher than MEM and Nott in the present study. However, the sphere value from the Canon was very close to MEM and Nott ARs. Two previous studies[3,4] found minimal mean differences between Nott and autorefractor measurements of AR. The mean and standard deviation of the difference between Nott and autorefractor measures of AR were very similar using the Canon sphere in this study (0.04 D $\pm$0.32) to those in the Rosenfield et al.[3] (0.02 D $\pm$0.33) study. The mean and standard deviation of the differences of Nott and autorefractor accommodative response for a closer viewing distance found by McClelland and Saunders[4] were 0.06 D $\pm$0.51.

Repeatability of MEM and Nott

The 95% limits of agreement of two examiners on MEM and Nott vary in different studies, ranging from about $\pm$0.2 D to about $\pm$0.5D. The 95% limits of agreement for interexaminer reliability in the present study were $\pm$0.17 D for Nott and $\pm$0.31 D for MEM. Based on the table of data in the Locke and Somers study,[5] their 95% limits of agreement for interexaminer reliability would be $\pm$0.37 D for Nott and $\pm$0.16 D for MEM. McKee[24] found that examiners agreed within 0.50 D in 94% of 163 children on MEM. In the present study the 95% limits of agreement for comparison of MEM and Nott ($\pm$0.55 D) was about two to three times greater than the interexaminer reliability for the separate tests ($\pm$0.17 D for Nott and $\pm$0.31 D for MEM). However, in the Locke and Somers study,[5] the 95% limits of agreement between MEM and Nott ($\pm$0.22 D) was comparable to the interexaminer reliability for the individual tests ($\pm$0.37 D for Nott and $\pm$0.16 D for MEM).

Lag of accommodation measurements from the present study

For the purposes of the present study, results were expressed as ARs, simply because the numbers that come directly from two of the three testing procedures (Nott and Canon) are response values rather than lags. For clinical purposes, the results of dynamic retinoscopy are more commonly expressed as the lag of accommodation. Because the accommodative stimulus in the present study was 2.50 D, the lags are simply 2.50 D minus the accommodative response.

The mean lags of accommodation in the present study were 0.89 D with both Nott and MEM, which are somewhat higher than the lags reported for other studies in young adults. In comparison, Locke and Somers[5] reported mean lags of 0.50 D with MEM and 0.60 D with Nott for a 40 cm test distance. Cacho et al.[7] found mean lags of 0.74 D with MEM and 0.42 D with Nott, also for a 40 cm test distance. Penisten et al.[11] found a 0.77 D mean lag on MEM with a 50 cm test distance, which would be expected to show a lower lag than at 40 cm.

CONCLUSIONS

The results of this study indicate close agreement of MEM dynamic retinoscopy and Nott dynamic retinoscopy for average accommodative response for a 40 cm test distance. However there was a wider range of measurements with MEM retinoscopy than with Nott retinoscopy. The agreement between examiners on each of the dynamic retinoscopy techniques was better than the agreement between methods.

The results of the present study and of previous studies suggest that measurements of lag of accommodation are lower with Nott than with MEM retinoscopy in high lag cases. That finding should be considered in the formulation of guidelines for determination of add powers from MEM and Nott in accommodative insufficiency cases.

SOURCES

A. The Autoref R1 was manufactured by Canon. The address for Canon headquarters in the U.S. is: Canon USA, Inc., One Canon Plaza, Lake Success, NY 11042 (email address: ccenter@va.ccsi.canon.com).

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Date accepted for publication:
August 29,2005

EDITORIAL continued

to Associates. "Perspectives on the Optometric Examination," presented by Dr. Greg Kitchener at the Heart of America Congress provided clinical insights into the probes used in behavioral vision care. Books by the late Al Shankman, O.D., *Psycho-Behavioral Vision Enhancement (PBVE)* and Ray Gottlieb, O.D., *Attention & Memory Training*, as well as a compendium of papers from the Kraskin Invitational Skeffington Symposium were published and distributed to Clinical Associates around the world.

"*Readalyzer*," an eye movement recording system, and *VisionBuilder*, a computer-based vision therapy program, were added to the thousands of products offered to the profession through OEP. *Readalyzer* was developed by the same engineers who produced the Visagraph, but specifically for optometric use. *VisionBuilder* combines many of the most widely used therapy techniques into a single program that can be used in the office or for home therapy, under the guidance of the optometrist.

Nearly 300,000 consumer information pamphlets were distributed in 2005, along with several thousands of tests, books and manuals. OEP's *VisionExtension Department* has become a primary source for many optometrists for supplies, tests, equipment used in their practices daily. All materials are available through the on-line store at www.oep.org .

It has been anything but quiet at OEP this year! I would like to thank the Board of Directors and the professional staff, Theresa Krejci, Sally Corngold, Kathleen Patterson, Paul Richardson, Aiko Heard, Karen Ruder, Dr. Koe Johnson, Leslie Vu and Allison Higley for their efforts on your behalf. Working with the many volunteers who serve OEP in many different ways, as well as with the Board and the staff, is both rewarding and enjoyable.

We wish you all Peace and Happiness in the coming year.