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Contact Information

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Bernell Discount

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Questions and Answers

by Robin Lewis, O.D.

and

Robert Hohendorf, O.D.

Q 1. Sometimes I see obvious exophoria or esophoria on the cover test objectively, but get a reverse response subjectively. I still do not know how to interpret this. Any insights?

Rob: There are a number of possible interpretations. The most obvious is that the person is not able to interpret, label, or communicate the direction of movement they see. The most extreme example is the strabismic who gives a paradoxical "AC" response.

Bob: No target movement noticed when I see eye movement indicates to me suppression. It can also be poor patient awareness (which may be suppression but, doesn't have to be), or it could be problems with the patient's ability to understand or communicate what they see. I also think some have poor proprioceptive awareness of their eye muscles.

Q 2. For years the usual response I would hear when I asked the patient which way the target moves is the target moves back and forth. Then I would ask which way compared to the occluder.

More and more I have patients say they see movement. When I ask which way, they respond to the right or left, but not back and forth or left and right. Since I know the target cannot keep moving in the same direction, it must move back. I am using the same instructional set I have always used. So something is changing in society, that I cannot explain, that they are unable to communicate the back and forth movement. They obviously are aware of the movement in one direction.

They should report the movement back as the occluder moves to the opposite eye. But the response is the target

moves right (or left) with no report of opposite movement.

Bob: I find reverse responses more common at near than at far. I believe it is one of three things. In the case of a strabismic, it may be an anomalous projection response. This is very rare to be discovered this way. It could also be a sign of visual confusion or the third situation, a communication problem. What I found on further questioning, was that they were either describing the way the cover moves or more often the way the background moves.

Sometimes patients tell me the target is moving in the same direction with each alternation of the cover. I sometimes ask "Do you think it will move out the door (or off the wall) if we keep doing this? They will then make a comment that it moves back, or be totally confused. Sometimes when it moves to the right, and then back to the middle, a patient will report it only moved one way (i.e. right then moved back to the middle, but not to the left.) I think (especially at far) the patient expects just the target to move. When the whole world moves, they get confused and their responses either show that confusion or there is silence.

I think that is why I find the cover test using small targets against uniform backgrounds improves subjective responses. Changing to smaller targets and more uniform background may help elicit the expected responses from more of your patients. Is this a figure ground, or figure ground movement problem for some?

Q 3. For years I have used the open ended instructional set for fusion findings, #9, #10, #16, & #17. Even more open since taking The Clinical Curriculum Courses. I am finding more patients who do not respond at all to this. Complete silence. More than ever before. Has this been your experience?

Rob to both 2 and 3 above:

No response is not no response. The seeming lack of response is telling us about the person's relative inability to be aware of visual phenomena and/or to understand what they see sufficiently to describe it. Vision development requires meaningful experiences.

We are experiencing more and more of our environment in a processed way. For example, many music consumers never hear live music. They purchase music software that is compressed in order to save digital storage space and altered to make it palatable to a less refined sensory system. Compressed audio files such as MPEGs are a good example. People don't know what is missing. Perspective is altered based on the experience of life.

In the case of a sensation that is more obviously visual, the primary way many people experience their world is now virtual using a computer or other flat screen. Newer TVs are bigger, and the information content is greater with high definition, but the screen is still flat. We see compressed scenes with greatly reduced z axis information. There is little depth of sensory experience, even with the biggest screen and best sound systems. What experience there is, is primarily passive in nature. Vision is an action based system. This means that the discriminations in question may not fully develop. It is not surprising that we sometimes hear little information from a patient based on a part of the visual process that is grossly underused.

Bob: This is something I also noticed more as my instructional sets became more open. Paul emphasizes the "pretend you are a play by play radio announcer." I've tried "I can't see what you see so you need to tell me everything that changes." I've also tried a number of different instructional sets over the years.

I now use the statement: "Tell me if you see or feel anything changing," I emphasize the TELL ME and the ANYTHING. I will even prod a little on some patients I know are shy by injecting "is everything staying the same?" Or "I can't hear you", but I only do this when I would really like to have a number for the test. This

should be noted in my notes as well. I have also added “Tell me as soon as you see or feel any changes. I emphasize “as soon as”. The second stating of the “see or feel” is often helpful for many as well. After all that improvement in my instructional set and after 33 years of practice, the patient sometimes still gives minimal verbal information.

Maybe our old communication phrases are not as effective as they used to be so they don't elicit the responses in some of the newer and older generations like they used to. You know, like "far out" has more meaning for my generation.

I can now better understand how Skeffington's 4th circle (Speech/Auditory-Communication) affects what we think we see and what we share with others.

The breakdown may be the patient's ability to notice, understand (the whole room is shifting, not just the target) or in communicating visual change. In different patients I suspect it is at least one of these at one time or another. Hope this helps. Isn't visual individuality wonderful?

Case Consultation Corner

By: Rob Lewis, O.D.

This case has a number of interesting features. Not in the least is that this concerns the child of an optometric student. EK, the child in question is a bright healthy fellow with strabismus.

EK was first seen in our office in 2006, at age 6, following his mother coming to visit our office prior to applying to optometry school. In spite of her childhood dream of being an optometrist, EK's mother had never known about the behavioral philosophy of optometry. After seeing how and what we do here, she brought EK to see if more could be done to develop his vision.

EK's mother had first seen an eye turn around two years of age. EK, came in wearing +2.00 O.U. with a +3.00 add. Surgery in 2003 and the use of plus eye glasses had been the only vision care EK had received.

At his first examination in our office, cover testing showed that EK had a small angle right ET at both near and far. Phorometry showed 9 eso at distance (#8) and 15 eso at near (#13b) with intermittent suppression.

Maximum plus to 20/20 at distance (#7) was +2.25 O.D. and +2.50 O.S. The #7 is a stable repeatable finding that can be used as an anchor point for the examination sequence.

EK's glasses prescription was reduced to +2.00 O.U. with a +2.00 add in order to give him some latitude to respond to changes at the near point. The total of +5.00 at near meant that EK had to almost completely relax his visual response to perform at near. If he is to develop an improved visual process, EK needs to learn to control an active visual response, especially for near activities. Just as vision problems begin at near and spread to distance, so can vision solutions.

We began Vision Therapy with EK that continued until his mother left for optometry school in the fall. By that time EK's prescription had been reduced to +1.50 O.U. with a +1.50 add. His overall near prescription had now been reduced from +5.00 to +3.00. EK has been wearing his current glasses for all waking activities. He has not been taking part in VT since he and his family moved to attend optometry school.

EK was examined at the optometry school 12/08, where a cycloplegic examination showed +1.75 O.D. and +2.00 O.S. with a quarter diopter of cylinder. EK's mother brought him to see us because the student, with the attending doctor's approval, wanted to prescribe the measured anisometropia and cylinder. The reason given for the change was to potentially relieve EK's visual stress.

During EK's most recent examination in our office (12/08), both distance retinoscopy (#4) and the #7 were +1.75 O.D. and +2.00 O.S. Phorometry through the #7 showed 11 eso (#8) at distance and 8 eso at near (#13b). Phorometry through his habitual near prescription (#13a) of +3.00 was 6 eso. Cover testing showed a remaining small angle intermittent right esotropia at distance and esophoria at near.

It is important to note that the amount of hyperopia has decreased, the distance ET is now intermittent and the near posture is habitually aligned. Just as vision problems begin at near and spread to distance, so can vision solutions.

Of special interest were the results of stereo testing. With his glasses on, EK showed accurate projection on the Keystone Basic Binocular Test and correctly identified 3 of 6 random dot targets at 600 arc second disparity. This is important because some have said that random dot stereopsis is impossible for those with infantile ET who do not achieve foveal alignment at an early age.

As EK continues to develop stereopsis, we expect to be able to drop the amount of prescribed plus at both distance and near, carefully titrating the result to symmetrically reduce his need for a distance compensating lens. It's ironic that we commonly see myopic patients shift towards a need for less plus (more minus) and yet we think it is unusual to expect vision development to move in a myopic direction for our hyperopic patients.

After his mother graduates, it is likely that EK will benefit from additional therapy designed to help him more fully understand and calculate space in a consistent symmetrical manner. The primary measure of success will continue to be EK's ability to independently and successfully direct action in his world. The clinical measures will be the stability, optical strength and symmetry of any optical intervention needed, the degree of stereopsis, and EK's ability to direct action with confidence and grace.