

CLINICAL CURRICULUM NEWS

FORMERLY KNOWN AS

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Questions and Answers

By: Paul A. Harris, O.D.

Questions from abroad on dealing with verticals

- Q. How do you treat a hypertropic patient? If a hypertrope has a compensating head tilt isn't that fine? Do we need to do anything with them? If the patient doesn't have diplopia and in most cases no problems with it, then why do something?
- A. On a general basis I still deal with each patient on a case by case basis. I know that that is no answer at all but let me see if I can give you some of the guidelines. First and foremost, "If it ain't broke don't fix it!" This is poor use of English, but it communicates my thoughts. If the person is doing fine in life and has been doing so for a while, meaning they have embedded some way to deal with the problem that is working and for which they have software, don't take any drastic actions. However, if the problem is relatively new, or if it is causing them problems, or it is changing, then you need to take some action.

Prisms can be used in a compensatory manner. When doing so I look for ways to justify giving the least amount of prism I can. A straight measure of a vertical phoria using a von Graefe method only gives a central tendency and does not give you a feel for the range of lenses that could be useful. I might use that as a starting point to do vertical fixation disparity testing in free space. By doing it in free space we allow the patient to assume different head positions as they feel free to do, giving us a chance to view some of the compensatory mechanisms that the patient has available to them.

When I do the vertical fixation disparity testing I do not look for the central tendency only. What I mean is that I know that many people do fixation disparity testing only to find THE lens that makes it all straight, aligned and solid. I want to probe a wide range of lenses and to see how the patient reacts to these. I'm looking for how wide the range of alignment is. I'm looking at the edges to see how quickly the alignment changes with little changes of prism. Do they begin tilting there or a few diopters before? This gives me a sense of how much less prism I can get away with and to what degree they will use a head tilt to compensate.

I view most prism prescribed this way as compensatory. However, some conditions may require long-term use of such a lens. Generally, however, I would institute vision therapy for the vertical if, and only if, the patient has unmet needs that are not fully satisfied with the prisms. Often these needs are that the patient would like to wear contact lenses; and until we reduce or eliminate the vertical compensatory prism, they will always be wearing spectacles.

Q. Prisms could be used, but if I can avoid it, I will.

A. I agree, but as I said, in some instances it is necessary and should be used. There may also be some question as to what form of prisms to use. I keep a wide range of Fresnel prisms in stock so that many patients with recently induced vertical misalignments, who are suffering from diplopia can walk out of the office with some relief. Many of these cases are following head injury, stroke, or other neurological, physiological, or mechanical muscular problems. In some instances the misalignment is so variable and non-concomitances exist that the best decision may be temporary degrading of the non-sighting eye. For this I strongly recommend the use of Bangerter filters and to not patch the eye in question. I also suggest using the least occlusive Bangerter filter that gets the job done.

Q. I do know that some train hypertropes, but I don't want to get into that, at least not now.

If you remember from the Strabismus and Amblyopia course, in addition to the regular program there were some extra activities to include when you have a vertical problem. The key points were added in by Bill Ludlum when he showed that jump duction vertical activities were the key to changing the underlying vertical misalignment. Early on in my work in the field, I thought the only way was to work to increase vertical fusion ranges. This was successful in some cases, but was very hard work for me and the patient. In the end they could straighten their eye but they still had an underlying vertical misalignment that they actively worked to overcome. By following Ludlum's suggestions, I found that the vertical misalignment actually reduced independently of the range of vertical fusion. So what I perceived as being very difficult turned out to be relatively straight forward when following these new principles.

Q. What will happen if I give a "normal" pair of glasses (i.e. no vertical prisms) to a patient with hypertropia and compensating head tilt? Will he/she get induced prisms, or will it work out ok because of the head tilt.

A. I believe that I have answered this above. The key here is what is the nature of the cause? Is it long-standing and stable or new and unstable? Each is going to require a different solution. Also, how much head tilt is acceptable to the patient? Will we induce long-term musculo-skeletal changes because we chose to not assist them through the judicious use of prisms and/or VT? I would question them in detail about neck and back problems, balance problems, motion sickness problems, etc., all of which might be alleviated or reduced by the prisms and/or VT.

One more point is to be careful to not take away something that is there. What I mean is, if they already have some prism, even if it's much less than you measure, you might be inclined to remove the small amount of prisms thinking, "Oh this can't be of any help, and I'll get rid of it." Then they come back either complaining about the glasses or with more of a problem later. That little amount of prism may have just been what was needed to get them to the point that their compensatory skills could be used successfully. Taking away just that little bit, which seemed useless, might have tipped the apple cart or broken the camels back and taken the patient just outside of their capabilities for compensation.

Q. If a person suppresses one eye, is it possible for the suppression to switch from one to the other eye? I guess as long as the visual acuity is good he has to somehow use both eyes? Is it necessarily the same eye a patient suppresses at distance and near?

A. I think that there are some very significant misunderstandings about suppression in general. First, I feel strongly that nearly all people suppress, or fail to use, parts of the flows in one or the other channel on a regular basis and there is nothing wrong about this. Please refer to my article, "The

Binocular Continuum”¹, for definitions of “flow” and “channel” and for a more complete description of my view of binocularity. Most people, when using the binocular system in the state of interaction or in any other state to the right on the binocular continuum, are, by definition, not using some part of the flow through one channel.

Now, almost never does a person totally shut down a whole channel. This is one of the myths of suppression. They do not suppress the entire flow through that channel. They typically shut down, or stated more accurately, fail to select the central aspect of the flow for amplification and thereby do not send on to other brain centers that potentially useful information. Thus, that potential information is not available to other parts of the brain and the person functions as if that additional information does not exist. Again, this does not apply to the entire flow in a channel but usually applies to a single part of the flow. In the Strabismus & Amblyopia course we talked about this occurring primarily to avoid “confusion” and diplopia.

So even in “normals” suppression occurs on and off during the day depending on the needs of the person, their fatigue levels, the demands of the situation, etc. As we discussed in the course, suppression is not an efficient way to deal with a long-term problem as it costs a great deal of effort and energy to maintain. Over time the system, if forced to keep suppressing, may move on to other deeper forms of adaptation in order to conserve energy. I think of active suppression mechanisms as signs that something is changing and action should be taken to help guide the patient to a more efficient use of the binocular system.

Q. Could contact lenses and monovision work for a patient with hypertropia, compensating head tilt and suppression?

A. Another very interesting question. If there is a head tilt, that gives you evidence that they are trying to use both channels at the same time. If they truly alternate then generally you will not see the head tilt. When you go to monovision, particularly in contact lens form, and you remove all prism, you are effectively pushing them over the hill towards the solution of decreasing the chance that they will ever use the flows from both channels simultaneously, except in the case of the most gross targets. You are effectively pushing them towards single-sided use of the binocular system.

In some people this may be the best alternative. For example in cases of cyclos that persist or massive image size differences or forms of image distortion that cannot be resolved, assisting them by helping them learn to use one channel at a time for P-cell pathway demands may be beneficial. However, I would prefer to use this as a treatment of last resort.

Reference:

1. Harris, Paul, “The Binocular Continuum”, JBO, Volume 13/2002/Number 1

Course Added to Schedule

Demand has necessitated that a TBI/ABI Course be added to the 2004 schedule. Just in case you are not aware, it has been scheduled August 14-16, 2004 in Baltimore, Maryland and Paul Harris will be the instructor. There are only 6 more spaces available. Please let Karen or Theresa know if you are interested in this course. Click here <http://babousa.org/tbicrs.html> to read the course description and prerequisites. Click here <http://babousa.org/schedule.html> for the entire remaining 2004 course schedule.

New Web Site

Wayne Engineering now has a new web site. They have their products as well as all the product manuals on the site. Visit them at: www.wayneengineering.com. Coming soon, on line shopping.

New Product Now Available

Vision Builder, the new windows version of the popular ReadFast program, now has an Office Version available as well as the individual Vision Builder Home CD. The office version, designed to be used on all computers in one office location, will track the results of multiple patients, so you have immediate reference to your patient's records. It has unlimited runs and allows free updates from the Vision Builder web site. It also gives you the option of adding stories yourself from any electronic media. For a free sample try of Vision Builder go to: www.visionbuilder.no. Vision Builder Office will make tracking your patients much easier, while the Vision Builder Home can still be given as a home therapy adjunct to your office-centered program.

If you purchased the Vision Builder CD prior to February 2004, go to www.visionbuilder.no to register, using the registration number on the back of the Vision Builder CD case, and get a free upgrade.

New Retinoscopy Paper

A paper describing several types of Retinoscopy has been written by the Clinical Curriculum instructors and others. Check this link to read the Retinoscopy Paper on our web site.
www.babousa.org/retinoscopy.pdf.

Consultation Corner

Edited by: Robert Hohendorf

The following is a case presented by Robert Copeland, Wyomissing, PA. This is a change from our normal format of having the case presented by an instructor. We ask for your input and the instructors will respond as well.

BR's case was introduced in the August 2003 Newsletter and continued in the November 2003 Newsletter. A brief review: BR DOB 9/21/51, age 50 years old at time of initial examination had suffered a head trauma followed by many vision symptoms appearing several months after the incident. BR's symptoms included an inability to sustain on tasks when there were any changes in ambient light. This was affecting her ability to work as a laborer making circuit boards, affecting her self-esteem and her behavior. Her job was in jeopardy and she had to discontinue her job and be placed on disability. She received a lot of satisfaction from her work and wanted to get back to it as soon as possible. Please click on <http://babousa.org/newslet.html> to review the first two installments of BR's case.

Current installment of Case Report BR by Robert Copeland with interspersed comments by Clinical Curriculum instructor Rob Lewis, comments by instructor Paul Harris follow:

BR is a head trauma patient. She had many symptoms after falling at work and hitting her head. BR had already finished 48 sessions of in office vision therapy combined with a four days a week of home vision therapy. Early procedures were to restore some balance to BR's visual system and regain binocular vision at both far and near. Heavy emphasis was placed on BR learning eye control. Additionally she lacked many visual skills. Originally she was exophoric at far with alternating

exotropia at near point. Fusion findings were very low indicating very little flexibility to overcome any visual stress. BR's work consisted of wrapping wires for circuit boards. The reflection of light off of her work bothered her. She experienced diplopia, frequent headaches and short-term memory loss. At her previous visit many of her symptoms were resolving, we were seeing changes in BR's behavior and the analytical findings were unchanged. BR's long list of symptoms revolved around changes in lighting around her that forced her to pull her head away from the task at hand. BR's complaints made me feel she was attending to peripheral information and allowing it to distract her from her central vision and the tasks she was attempting.

BR has finished 24 more sessions of vision therapy. During this period we concentrated on binocular activities with lights. For example, she was able to do Vectographs with light behind them for the first time. We encouraged BR to localize the targets and size changes. We had her walking a straight line with six Marsden balls swinging at different speeds and she had to avoid them while watching a target placed at eye level. Once she was able to be aware of where she was in relation to the balls and feel comfortable, we added a strobe light to the activity. BR was working very hard and able to accomplish all the tasks in the therapy room with greater and greater ease.

BR was seen for a re-evaluation almost one year from the time she was first seen in my office. She reported most of her symptoms had resolved and she was eager to return to work.

Analytical Data:

	Initial	1st re-eval	2nd re-eval	3rd re-eval
Cover Test				
Far	Exophoria/low	Orthophoria	Exophoria/low	ortho
Near	Alternating Exotropia	Exophoria/high	Exophoria/high	Exophoria/high
Convergence Near Point				
Break	6 inches	4 inches	4 inches	2 inches
Recovery	8 inches	6 inches	6 inches	6 inches
Stereopsis with OEP/BABO Randot Test				
	0 seconds of arc	50 seconds of arc	20 seconds of arc	70 seconds of arc
Analytical Auto Refraction				
	OD +1.75-0.50x173 20/20	OD +1.75-0.50x173 20/20	OD +2.00-0.25x174 20/30	OD+2.00-0.25x010 20/20
	OS +1.75-0.50x014 20/20	OS +1.75-0.25x014 20/20	OS+1.74-0.25x010 20/20	OS+2.00-0.25x015 20/20
7 Subjective to 20/20	not done	not done	not done	OD+2.00-0.50x180 20/20
7A Subjective to BVA				
	OD +1.50-0.75x170 20/20	OD +1.75-0.50x165 20/20	OD +1.75-0.50x170 20/20	OD+1.50-0.50x180 20/15
	OS+1.50-0.75x020 20/20	OS +1.50-0.50x025 20/20	OS +1.75-0.50x020 20/20	OS +2.00-0.25x15 20/15
#8 Phoria at far				
	ortho x/8/4	1 exophoria 8/36/4	1 exo X6/2	orthophoria Data missing
Base out, Blur/Break/Recovery #9&10				
Base in, Blur/Break/Recovery #11	4/x	X8/4	X/8/0	x/4/0

**Near Control +2.00
over 7A**

Near Phoria thru control	12 exo	2 exo	12 Exo	16 exo
Base out Blur/Break/Recovery #16	X/16/0	X20/8	X/16/0	x/24/12
Base in, Blur/Break/Recovery #17	X24/16	X/16/0	X/8/4	x/4/-8
Positive Relative Accom #20		-1.25	-1.00 -0.50	-0.50
Negative Relative Accom#21		+1.25	+0.75 -1.00	+0.75

Findings still indicate a disorganized visual system.

Rob Lewis:

Stating that the system is disorganized is a bit like saying that the glass is half empty. I prefer to look at the half full part. How has she organized things to do what she does? What problem(s) is she trying to solve? The exam is telling you what solutions she has chosen, not what problems she has.

More therapy is out of the question due to insurance limitations and patients income status.

I try to arrange conditions so that third party coverage does not enter into my ability to help my patients. Thank you, Bob, for bringing this up. It has triggered a good bit that I would like to say. Look in a future newsletter for an article on this topic.

BR asked to return to work and she needed an authorization from me. I discussed the findings with her. She agreed to continue home therapy with follow up visits every three months. I wrote the letter authorizing her return to work.

Three weeks after she returned to work she phoned to say all her symptoms had resumed and she could not perform her job. I had her return and rechecked all findings. They were essentially the same as the initial evaluation findings.

My reason for agreeing to share this case is to get feedback. What did I over look in treatment? Should I have tried to keep BR in some other prescription or continue with office therapy?

In the very first course, and I'm sure we repeat this often, we talk about visual problems and optometric data problems. At times, we optometrists take solving the optometric data problems as our mission losing sight of the fact that our real task is to help the patient satisfy their unmet visual needs. I think that in this case you have done a degree of this and turned too much to treating these optometric data problems and turned them into doctor problems. In this case, it appears that you may have taught her numerous compensation strategies that worked OK (not well), as long as she was able to control her environment. When the visual environment changed and was too different than the environment she trained in, she couldn't juggle the numerous solutions to her problems and so fell back into her old ways of doing things.

I learned this one from Bill Ludlam. He told me that we often teach our patients wonderful compensatory strategies that they can use under certain circumstances. Unless they make the solutions part of themselves (embed or automate), they have a fragmented high-energy system that they can't always maintain. In a similar circumstance, I was looking at my prospective VT patients at Pacific when I saw I had an exotropia coming in. I said, "Cool, this will be an easy one!" Don Shuman heard me and asked what I meant. I told him I could teach the person to straighten the eye in a week or two. He said that would be pretty impressive, but then he asked me what good it would do to teach the person to straighten the eye without making it a part of how they saw the world.

I chose BR's case because she was a patient of mine that I was treating as I was taking the various Clinical Curriculum (BABO) courses. As I progressed with my course work, much of my thinking as to how and what I was doing was changing. I found my self-looking less at anatomy and mechanics of eyes and more at what is vision and I tried to adjust therapy accordingly.

I am still not sure why BR showed symptomatic relief with no changes visually. I understand that she maintained a fragile visual system and thus when hit with the return of stress conditions from work she regressed.

Over thirty years of practice has taught me that I see several categories of patients at the end of therapy. Those are:

1. Patients whose symptoms are relieved and all analytical findings change for the better.
2. Patients whose symptoms are relieved, but analytical findings do not seem to change.
3. Patients whose symptoms are not relieved while all analytical findings seem to improve.
4. Patients whose symptoms and findings do not change as well.

This is pointing out the differences between the findings and vision itself. The findings are a brief window into how the person has solved vision problems in the past. If they change the way they solve problems the findings will change.

If they are made more able to use the same strategies, the findings will stay the same, but the symptoms will abate. It is possible to get better at using existing strategies through therapy.

If the findings improve and symptoms remain, they have a burden they can't support, or we haven't finished therapy.

The point is that the findings are not vision problems. Unmet visual needs are the issue.

The first two categories I consider successful. I always wonder about the last two. Why do patients, after vision therapy, fail to learn new, successful visual patterns and use them in a more successful way? I came to BABO to seek answers. Now, through presenting one of my own cases I look forward to having input from the BABO instructors. I was also hoping that some of the input would be from other practitioners.

Thank you for this opportunity.

Glad you have a thick skin. I'm glad to have you for a colleague. Rob Lewis

Response by Paul Harris, OD

Bob Copeland, thanks for sharing with us your case and your thinking. You raise some interesting talking points. You state, “I concluded after the original evaluation that BR could be considered a VT I case, a VT II Case or a VT III case.” I was at least pleased to see the ‘or’ in there. What this seems to say to me is that you were confused. BR looked like she was a VT case but you didn’t know really what to do with her. I read more of that into what you have said and done than thinking that you felt she really needed all three.

There are some cases that present a difficult choice as to what precisely should be done. Some strabismic learning related visual problems cases can, at times, be a challenge. Sometimes I feel a need to ask my patient, “What do you want to work on first?” as if I really had control over it! What I mean by that is that each activity is a *vision* activity and each activity has the opportunity to possibly alter the entire visual process. So in my mind, there is no such thing as “stuff for fixing this” or “stuff for fixing that”. Any activity can be used with any member of the human race at any time in their life and it can be used effectively if and only if the loading is adjusted to present the proper level of challenge that the patient needs.

Now of course the way the grids have been put together and how we have presented the range of “burner settings” for each activity, they fall nicely into sequences that are more suited to certain general types of problems. This is what we teach. Now and again a patient comes in that just plain does not fit and we have to tailor the grid or grids to meet their needs.

Keep in mind that VT1 is a subset of both VT2 and VT3 so you need not choose a VT1 vs. either of the others. If you feel the patient needs more, then your choice is between a VT2 and VT3. I have a case that is a very low level performer with a strabismus. This child has been labeled as a pervasive developmental disorder. My feeling, and I have the parents of the patient oriented this way, is to begin with the lower level VT2 stuff and do this for about 16 weeks, then shift and hit the early VT3 stuff that was not part of the VT2 part for the next 16 weeks. We will then return to finish the VT2 grid and at the end see if there are any additional VT3 only activities that this patient might benefit from.

So in a way we have combined the VT2 and VT3 grids for this child to meet his needs. We will make sure we don’t duplicate things but we may indeed review some things that had not been done for 16 weeks or so to see if we get another “law of diminishing returns” steep decrease in performance improvement. You might remember from Kraskin’s, “VT In Action” that his homework rotated with certain activities being repeated at 6-month intervals. When the patient returns to just such an activity, they are changed by the other things they have done and bring so much more to their program.

Frequency of VT

You stated, “I decided to treat BR as a VT I case and she completed 24 sessions of in office vision therapy performed two times a week.” As you know the way the grids are set up was with the idea in mind that there would be 5 home practice sessions between in-office sessions. Some patients ask if they can speed up their vision therapy if they come into the office more often. In some instances patients are either just lazy or their life-style will not allow them to get to the homework on a consistent basis. Therefore they choose to come into the office twice a week to make us work them harder and more intensely than if left to their own devices. So the question that comes up is how fast do they move? I generally actually see them move more slowly than if they do their home activities regularly with the once a week in office VT.

At the twice a week interval, when they come in for the second session in the week, they are generally not ready to move on, so we end up just practicing some of the same things but drilling or working on them for longer. Since we don't have to explain the activity they get a chance to just do it. This becomes more like "training" than actual "therapy". They work, we observe, and together there is some incremental movement but generally not the big "ah-ha's" one might see during an intense therapeutic session. I'm interested to hear how you approach working through the grid with twice a week plus homework.

24 More Sessions

After the first 24 sessions you state, "Analytical findings showed minimal change and I prescribed a second set off 24 more sessions..." You also report that, "She reported many symptoms resolving at this visit." I'm intrigued here from a practice management point of view. This seems like what you were selling her was 24-session blocks of vision therapy and that you ended up having to sell her another 24-session block. Do you normally sell blocks of VT? As you know we have used the grid as a recommended minimum number of sessions to complete a therapy program. Nearly always you will find that an extra week here on this activity and an extra week or two on this activity will lengthen the treatment program by 10-15% of the length of the recommended grid. I would be interested in knowing what you sold her in the first 24-session block and what you hoped to have achieved?

To me the Progress Evaluations are not really to measure progress. I don't need the visits to know if progress is being made. Refer back to the Kraskin Principles of VT and you will see that both the OD and the patient should know session by session, activity by activity how much progress is being made. It seems like you used the progress evaluation to assess the progress rather than knowing how things were going. As an aside, if then these evaluations are NOT to assess progress what are they for? The main thing is to make sure that they have the correct lenses on. The secondary purpose is to make sure that the patient is motivated and this is done by assessing their current unmet needs and to see if the prior unmet needs have been met or still need some work. What seemed to be missing here was a discussion of the unmet needs and the degree that they had been met or not. It sounded like you felt that the analytical should tell you this but clearly the analytical is only a guide.

Refer back to the pink sheet to refresh your memory as to what we get from an analytical. We get things like, how much stress can a person handle or encounter, how well do they recover from stress, how embedded are they, are lenses available that will allow them to do things in a different way, are there lenses that will help them work with less stress, etc. There is nowhere in an analytical that we get a direct reading as to "how much longer is VT going to be needed for!" This only comes from an assessment of the unmet needs. Rather than see the tables you presented of the analytical with puzzles, due to seemingly unchanging numbers, I would have preferred to see lists of unmet needs in the beginning and how and when they were being met.

Disorganized System

After the second progress examination you state, "This was a case where symptoms are improving, but visual findings indicate a disorganized system." I would be very interested in what you mean by a "disorganized system". The person might be disorganized but I'm not sure how I would identify a disorganized system. I know that classically high recoveries meant that there was a quick desire to restore a solid view of the world and that high recoveries were thought to be good and low recoveries bad.

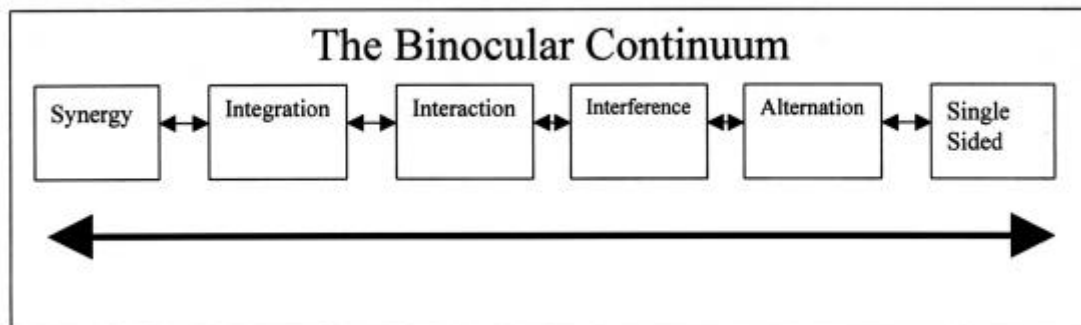
If you remember in the Art and Science Course (BVC) we talked about the cyclical nature of the findings as a person went through different stages of function altering structure. Recall the oval

diagrams showing these changes over time driven by stress. Some of the things we don't know about BR are what were the stresses on her during these time periods. What else was going on in her life then? Were there diet changes or changes in the home or with her life partner? None of this is told and all of it may be critical pieces that we are not seeing. At one point the breaks are big at distance and small at near and at another they are reversed. To some this might be "disorganized", but to me it's simply at another stage along the function alters structure stress-driven continua.

Binocularity and a Fragile Visual System

You state, "Other tests such as Van Orden Star and Cheirosopic tracings did show some increased binocularity. I prescribed another 24 sessions of in office visual therapy based on how fragile the visual system was." I am interested to hear how you get a measure of "degree of binocularity" from the Van Orden Star and Cheirosopic tracings but then talk about how the visual system was fragile. What clues or signs would one see that we have better binocularity from the VO Star and Cheiroscope? I can think of some possible ways of making this connection. However, since I use these activities for something else I have fallen out of the habit of making these inferences.

I would refer back to my paper entitled, "The Binocular Continuum", from the JBO. If, what you are saying is that BR showed that she had moved more to the left of the binocular continuum, and you gained this insight from the VO Stars and the Cheirosopes, then why also is she so fragile? Does fragile imply simply that she has newly moved there and has not embedded this new higher degree of flow and better use of the flow from both channels and therefore a tiny little life or stress disturbance could push her back along the right on the continuum so therefore she is "fragile"? Please help me understand the use of the terms, as they were the justification of the sale of 24 more sessions of treatment.



Reference:

Harris, Paul, "The Binocular Continuum", JBO, Volume 13/2002/Number 1

Over-Coming Stress

In your final segment you state, "Fusion findings were very low indicating very little flexibility to overcome any visual stress." I am assuming you meant to say that the bases out breaks at distance and near were both low, which means that she is not able to encounter and deal with high degrees of stress. In actual fact at the third progress exam the base out break at near is 24. I cannot read the base out break at distance, as the number in the box in the printout I have is the date of the progress examination.

I don't tend to think of stress as something to "overcome". I think of it something that must be used to perform purposeful work. There is an inherent stress built into the tasks of our lives. As we discussed in the Art and Science Course (BVC) when we went over the modern stress theory, there is a

tremendous amount of moderating or modulating factors that can intensify or mitigate stressor agents and their actions. What I would have liked to have seen, as previously mentioned, would be a table where you addressed the life factors that were at play and involved in the stress equation.

$Stress_{(Response)} = Stressor_{(Agent)} * Volume * Intensity * Time * Attitude * Appraisal * Fatigue * 1/Nutrition$

Final Questions

You ask some very good questions of yourself towards the end of the last section. These include:

- What did I over look in treatment?
- Should I have tried to keep BR in some other prescription or continue with office therapy?
- Why do patients, after vision therapy, fail to learn new, successful visual patterns and use them in a more successful way?

I have mentioned above some of the things I think you overlooked and I sense from your comments that these are now more in the forefront of your thinking. You overlooked the person and her unmet needs and concentrated more on the findings and the activities.

There was a massive life event that she needed to get through and she probably needed to be with you in the therapy room during the transition from not working to working. She may have needed to do this in a transition step by going back part time and then increasing the time per day slowly, if possible. Had she been with you when this was attempted you might have seen the signs early on and known how to help her handle what she is dealing with.

I am dealing with a TBI case right now that we have just finished work with. She is a 21-year-old that was in a car accident and went from being a star student with the world as her oyster to being overwhelmed by a community college's remedial reading course that is working on comprehension. By being part of her life I was able to sit her and her family down and recommend that there were other ways to work on comprehension. In the course they were reading some book on the holocaust. This is a kid that probably needs to start all over again to gain flow in reading with some good old Roald Dahl or some basic chapter books through which she can fly AND make sense of the reading. She needs to build up her reading step by step and recap some of the stages she had been through before her head injury. Jumping right to college level stuff and handling her like the normal college reading problem wasn't the answer. I told them to drop the course and how to work on the current problem. Your patient went to a certain point and then dropped you and your support cold turkey without the weekly or bi-weekly visits. Your office became a safe haven and a positive support point and just when she would encounter massive life stresses she was cut loose. Sometimes we do VT not because the patient needs the activities but because then need all the other stuff that comes with the program during these very difficult life transition points.

Finally there is no way to know what additional life stresses a person will encounter AFTER we have finished with them. You may think that they are just fine and ready to tackle the world and then something awful hits and they don't. Let's not end on a sour note. Let's rejoice at the benefits BR did get, and she got many that she will be able to draw on for the rest of her life, and let us rejoice at the lessons you have learned and hopefully others can learn vicariously by your decision to share your experiences. Thank you Bob.