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Residency Program in Vision Therapy and Rehabilitation at The Optometry Center for Vision Therapy (OCVT) in Austin, Texas

Briana Larson, OD, FCOVD, FAAO, FNORA
Erica O'Brien, OD, FCOVD
Aubrey Breithaupt, OD

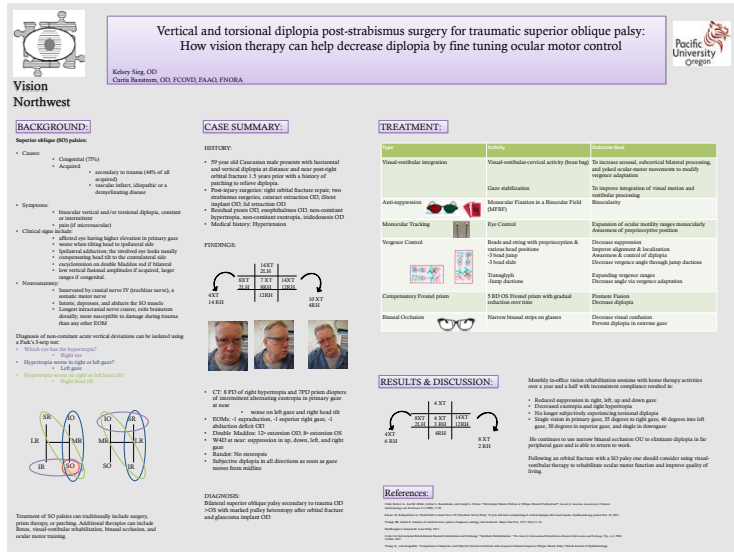
Contact Author:

Binocular Gameplay using the Nintendo 3DS Hand-held Console for the Treatment of Amblyopia

Alicia Feis, OD
Christina Esposito FAAO, FCOVD
Caitlin Miller OD, FAAO
Contact Author:

Vertical and torsional diplopia post-strabismus surgery for traumatic superior oblique palsy: How vision therapy can help decrease diplopia by fine tuning ocular motor control

Kelsey Sieg, OD
Curtis Baxstrom, OD, FCOVD, FAAO, FNORA



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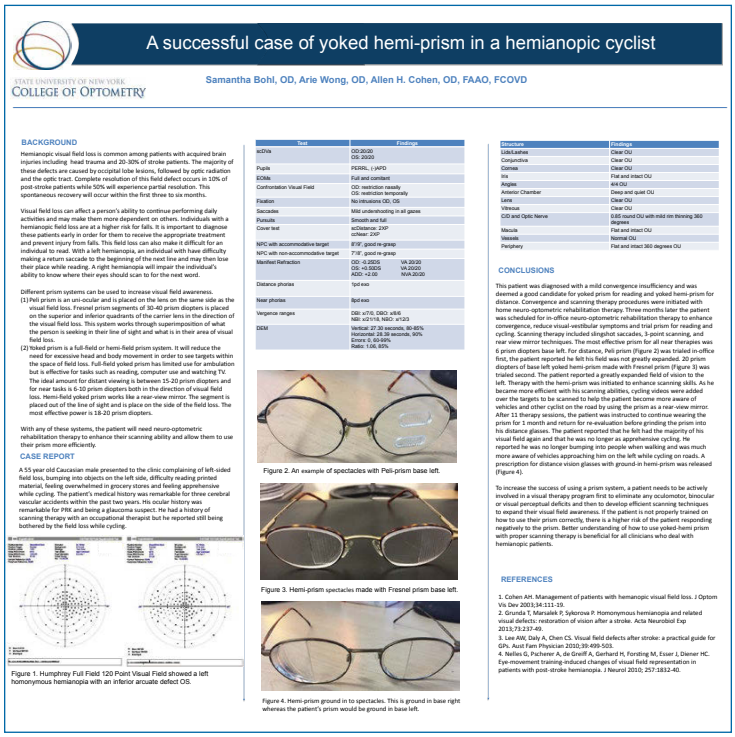
A successful case of yoked hemi-prism in a hemianopic cyclist

Samantha Bohl, OD
Arie Wong, OD
Allen H. Cohen, OD, FAAO, FCOVD



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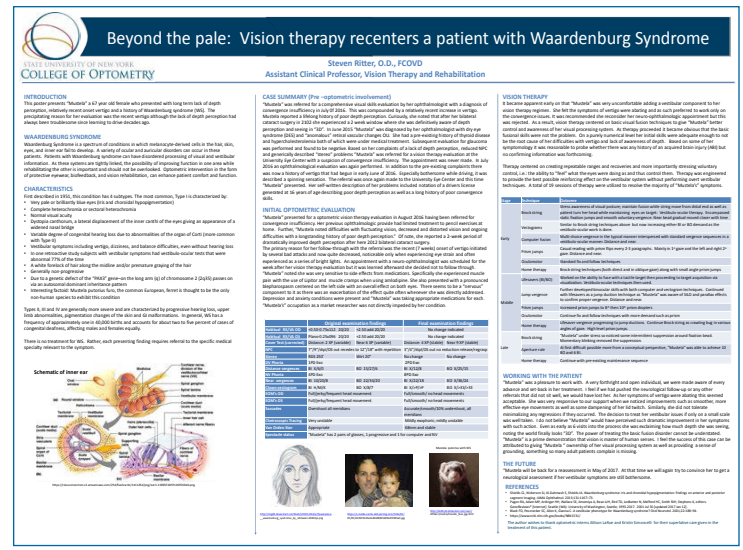
Beyond the pale: Vision therapy recenters a patient with Waardenburg Syndrome

Steven Ritter, OD, FCOVD



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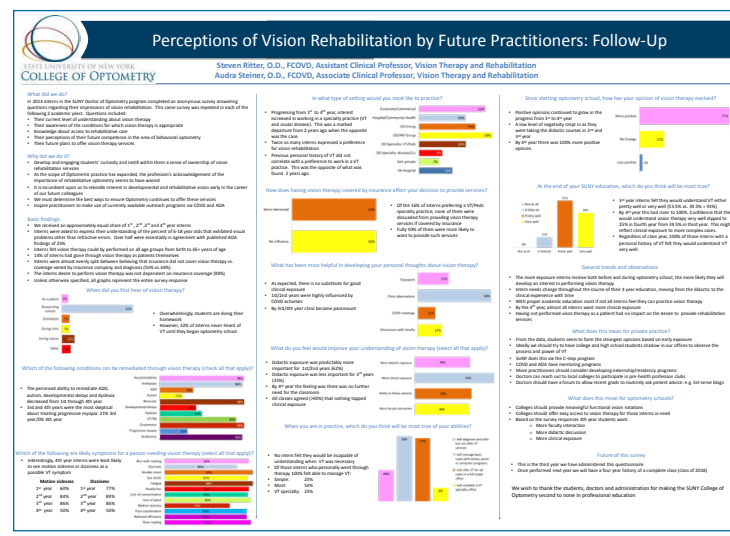
Perceptions of Vision Rehabilitation by Future Practitioners: Follow-Up

Steven Ritter, OD, FCOVD
Audra Steiner, OD, FCOVD



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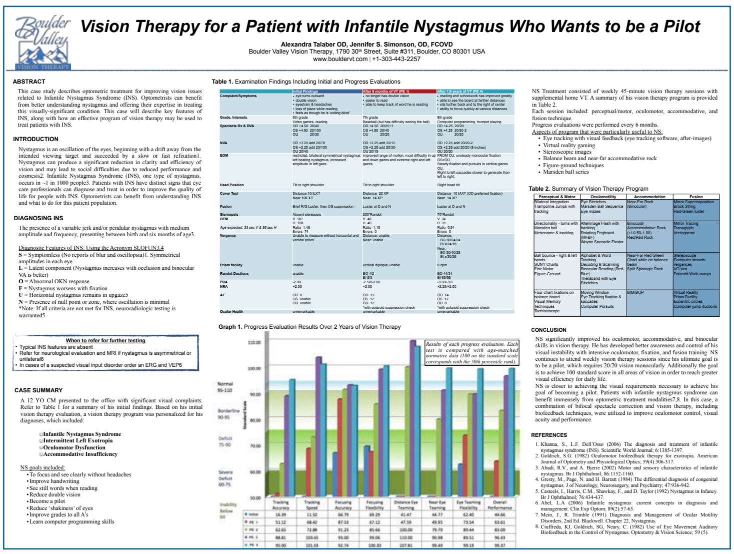
Vision Therapy for a Patient with Infantile Nystagmus Who Wants to be a Pilot

Alexandra Talaber OD
Jennifer S. Simonson, OD, FCOVD



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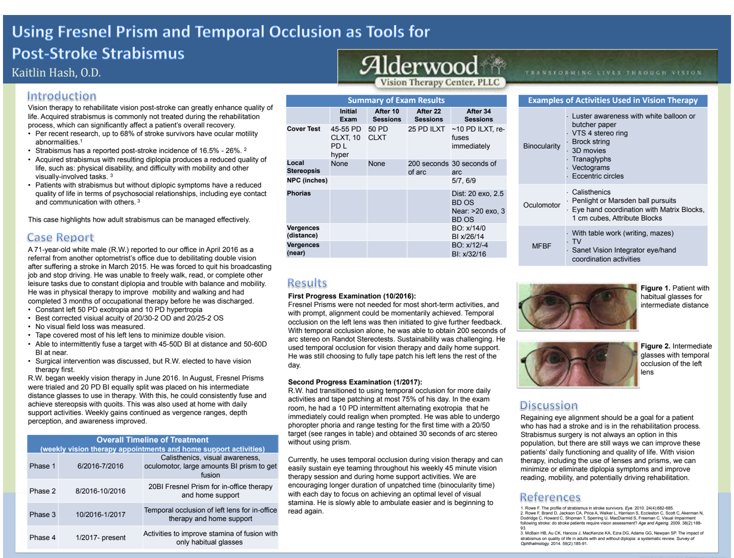
Using Fresnel Prism and Temporal Occlusion as Tools for Post-Stroke Strabismus

Kaitlin Hash, OD



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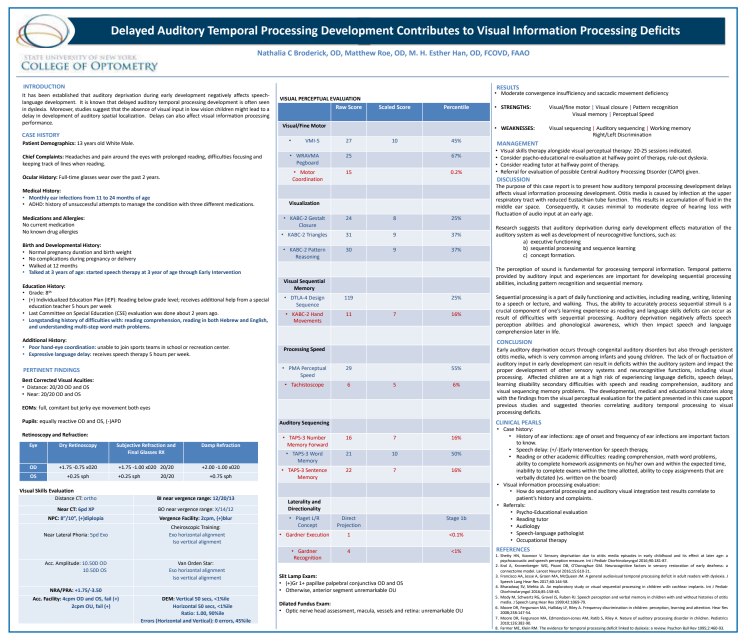
Delayed Auditory Temporal Processing Development Contributes to Visual Information Processing Deficits

Nathalia C Broderick, OD
Matthew Roe, OD
M. H. Esther Han, OD, FCOVD, FAAO



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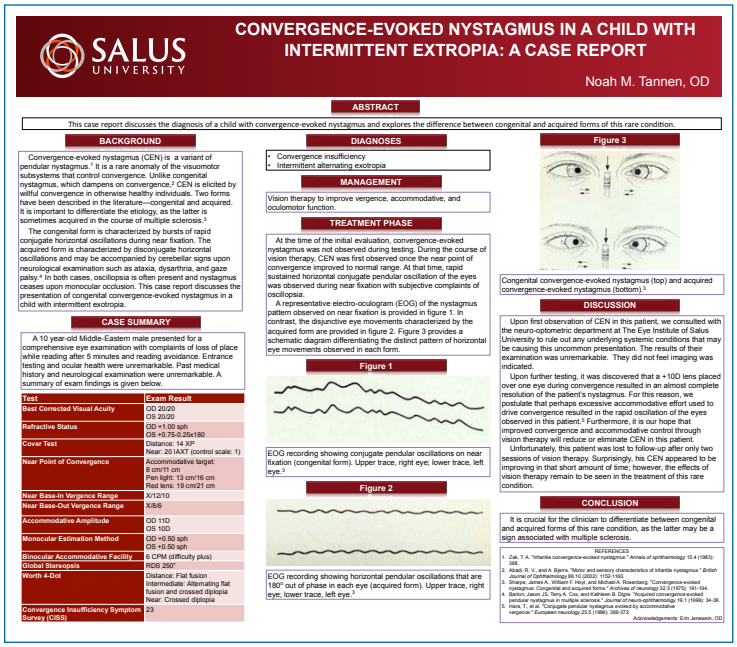
Convergence-Evoked Nystagmus in a Child with Intermittent Extropia: A Case Report

Noah M. Tannen, OD



CONVERGENCE-EVOKED NYSTAGMUS IN A CHILD WITH INTERMITTENT EXTROPIA: A CASE REPORT

Noah M. Tannen, OD

SALUS UNIVERSITY

ABSTRACT

This case report discusses the diagnosis of a child with convergence-evoked nystagmus and explores the difference between congenital and acquired forms of this rare condition.

BACKGROUND

Convergence-evoked nystagmus (CEN) is a variant of pendular nystagmus.[1] It is a rare anomaly of the visuomotor subsystems that control convergence. Unlike congenital nystagmus, which dampens on convergence,[2] CEN is elicited by willful convergence in otherwise healthy individuals. Two forms have been described in the literature—congenital and acquired. It is important to differentiate the etiology, as the latter is sometimes acquired in the course of multiple sclerosis.[3]

The congenital form is characterized by bursts of rapid conjugate horizontal oscillations during near fixation. The acquired form is characterized by disconjugate horizontal oscillations and may be accompanied by cerebellar signs upon neurological examination such as ataxia, dysarthria, and gaze palsy.[4] In both cases, oscillopsia is often present and nystagmus ceases upon monocular occlusion. This case report discusses the presentation of congenital convergence-evoked nystagmus in a child with intermittent exotropia.

CASE SUMMARY

A 10 year-old Middle-Eastern male presented for a comprehensive eye examination with complaints of loss of place while reading after 5 minutes and reading avoidance. Entrance testing and ocular health were unremarkable. Past medical history and neurological examination were unremarkable. A summary of exam findings is given below.

Test	Exam Result
Best Corrected Visual Acuity	OD 20/20 OS 20/20
Refractive Status	OD +1.00 sph OS +0.75-0.25x180
Cover Test	Distance: 14 XP Near: 20 LXT (control scale: 1)
Near Point of Convergence	Accommodative target: 8 cm/ 11 cm Pen light: 13 cm/16 cm Red lens: 19 cm/21 cm
Near Base-In Vergence Range	X12/10
Near Base-Out Vergence Range	X8/6
Accommodative Amplitude	OD 11D OS 10D
Monocular Estimation Method	OD +0.50 sph OS +0.50 sph
Binocular Accommodative Facility	6 CPM (difficulty plus)
Global Stereopsis	RDS: 250"
Worth 4-Dot	Distance: Flat fusion Intermediate: Alternating flat fusion and crossed diplopia Near: Crossed diplopia
Convergence Insufficiency Symptom Survey (CISS)	23

DIAGNOSES

- Convergence insufficiency
- Intermittent alternating exotropia

MANAGEMENT

Vision therapy to improve vergence, accommodative, and oculomotor function.

TREATMENT PHASE

At the time of the initial evaluation, convergence-evoked nystagmus was not observed during testing. During the course of vision therapy, CEN was first observed once the near point of convergence improved to normal range. At that time, rapid sustained horizontal conjugate pendular oscillation of the eyes was observed during near fixation with subjective complaints of oscillopsia.

A representative electro-oculogram (EOG) of the nystagmus pattern observed on near fixation is provided in figure 1. In contrast, the disjunctive eye movements characterized by the acquired form are provided in figure 2. Figure 3 provides a schematic diagram differentiating the distinct pattern of horizontal eye movements observed in each form.

Figure 1

EOG recording showing conjugate pendular oscillations on near fixation (congenital form). Upper trace, right eye; lower trace, left eye.[3]

Figure 2

EOG recording showing horizontal pendular oscillations that are 180° out of phase in each eye (acquired form). Upper trace, right eye; lower trace, left eye.[3]

Figure 3

Congenital convergence-evoked nystagmus (top) and acquired convergence-evoked nystagmus (bottom).[3]

DISCUSSION

Upon first observation of CEN in this patient, we consulted with the neuro-optometric department at The Eye Institute of Salus University to rule out any underlying systemic conditions that may be causing this uncommon presentation. The results of their examination was unremarkable. They did not feel imaging was indicated.

Upon further testing, it was discovered that a +10D lens placed over one eye during convergence resulted in an almost complete resolution of the patient's nystagmus. For this reason, we postulate that perhaps excessive accommodative effort used to drive convergence resulted in the rapid oscillation of the eyes observed in this patient.[2] Furthermore, it is our hope that improved convergence and accommodative control through vision therapy will reduce or eliminate CEN in this patient.

Unfortunately, this patient was lost to follow-up after only two sessions of vision therapy. Surprisingly, his CEN appeared to be improving in that short amount of time; however, the effects of vision therapy remain to be seen in the treatment of this rare condition.

CONCLUSION

It is crucial for the clinician to differentiate between congenital and acquired forms of this rare condition, as the latter may be a sign associated with multiple sclerosis.

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1. Zak, T. A. "Infantile convergence-evoked nystagmus." Annals of ophthalmology 15.4 (1983): 368.
2. Abadi, R. V., and A. Bjerre. "Motor and sensory characteristics of infantile nystagmus." British Journal of Ophthalmology 86.10 (2002): 1152-1160.
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4. Barton, Jason JS, Terry A. Cox, and Kathleen B. Digre. "Acquired convergence-evoked pendular nystagmus in multiple sclerosis." Journal of neuro-ophthalmology 19.1 (1999): 34-38.
5. Hara, T., et al. "Conjugate pendular nystagmus evoked by accommodative vergence." European neurology 25.5 (1986): 369-372.

Acknowledgements: Erin Jenewein, OD

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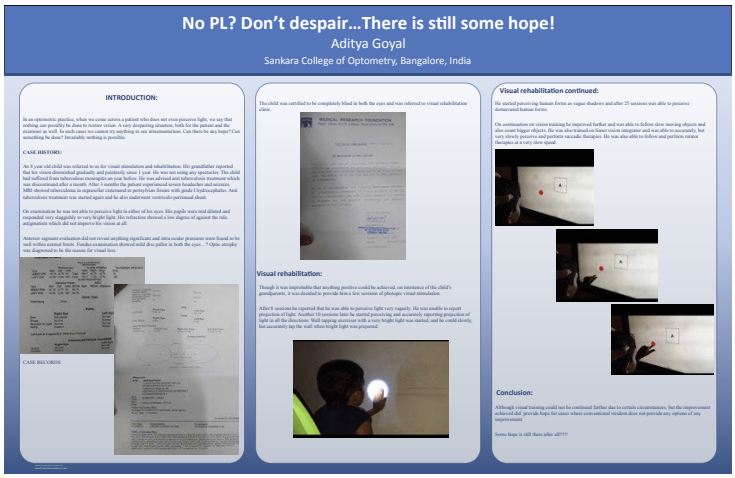
No PL? Don't despair ... There is still some hope!

Aditya Goyal



No PL? Don't despair...There is still some hope!

Aditya Goyal

Sankara College of Optometry, Bangalore, India

INTRODUCTION:

CASE HISTORY:

CASE RECORDS:

Visual rehabilitation:

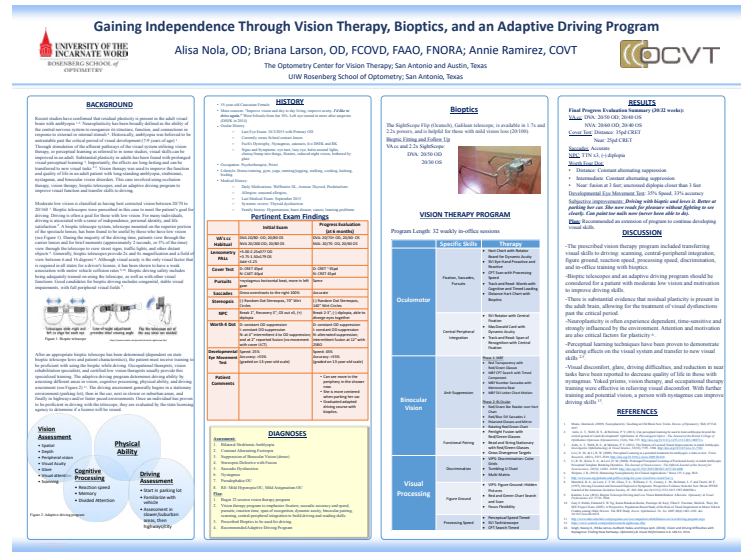
Visual rehabilitation continued:

Conclusion:

Contact Author: ✉

Gaining Independence Through Vision Therapy, Bioptics, and an Adaptive Driving Program

Alisa Nola, OD
Briana Larson, OD, FCOVD, FAAO, FNORA
Annie Ramirez, COVT



Gaining Independence Through Vision Therapy, Bioptics, and an Adaptive Driving Program

Alisa Nola, OD; Briana Larson, OD, FCOVD, FAAO, FNORA; Annie Ramirez, COVT

The Optometry Center for Vision Therapy; San Antonio and Austin, Texas

UIW Rosenberg School of Optometry; San Antonio, Texas

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OCVT

BACKGROUND

HISTORY

Pertinent Exam Findings

DIAGNOSES

Bioptics

VISION THERAPY PROGRAM

RESULTS

DISCUSSION

REFERENCES

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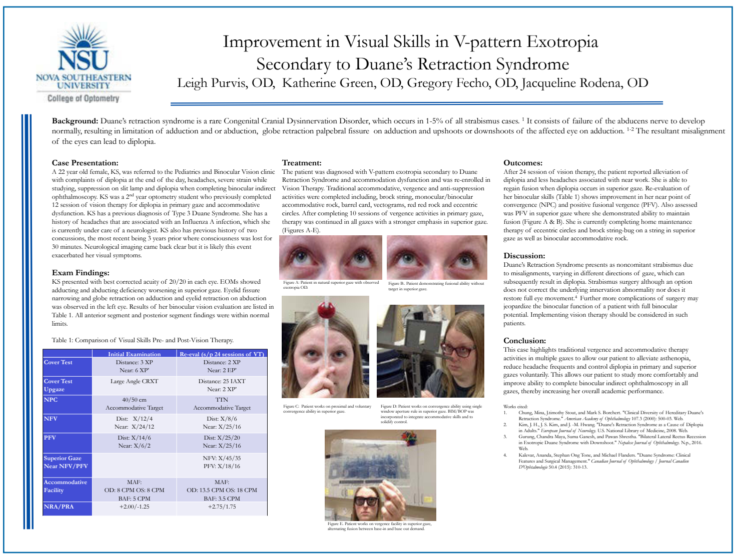
Improvement in Visual Skills in V-pattern Exotropia Secondary to Duane's Retraction Syndrome

Leigh Purvis, OD
Katherine Green, OD
Gregory Fecho, OD
Jacqueline Rodena, OD



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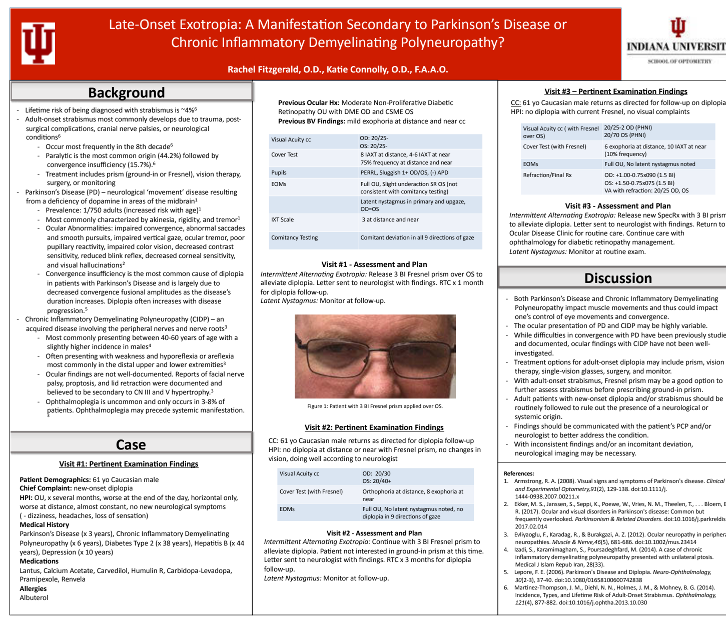
Late-Onset Exotropia: A Manifestation Secondary to Parkinson's Disease or Chronic Inflammatory Demyelinating Polyneuropathy?

Rachel Fitzgerald, OD
Katie Connolly, OD, FAAO



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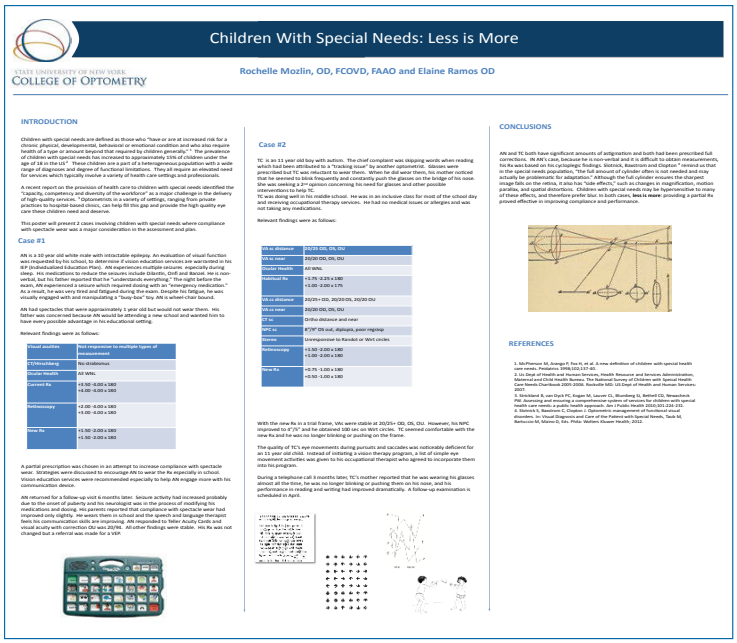
Children With Special Needs: Less is More

Rochelle Mozlin, OD, FCOVD, FAAO
Elaine Ramos OD



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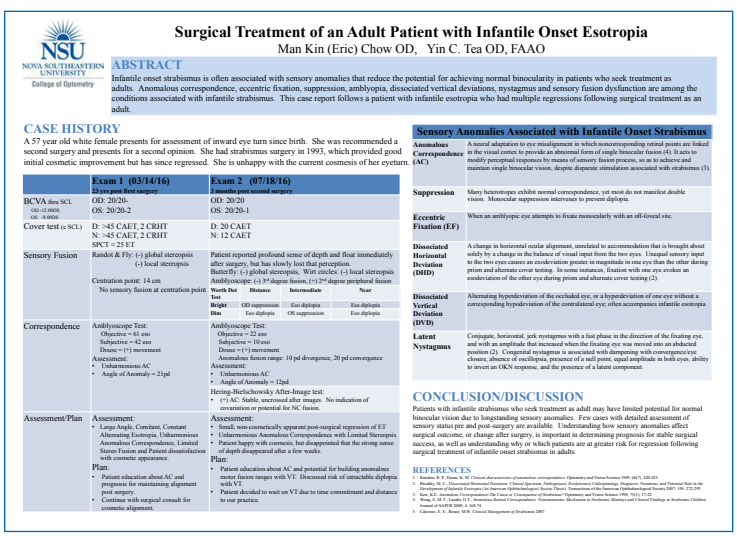
Surgical Treatment of an Adult Patient with Infantile Onset Esotropia

Man Kin (Eric) Chow OD
Yin C. Tea OD, FAAO



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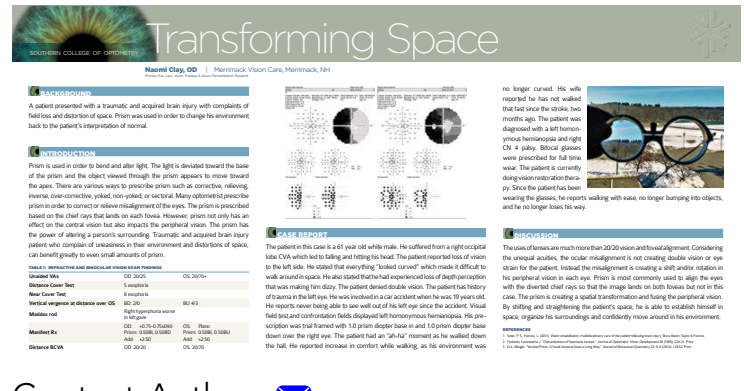
Transforming Space

Naomi Clay, OD



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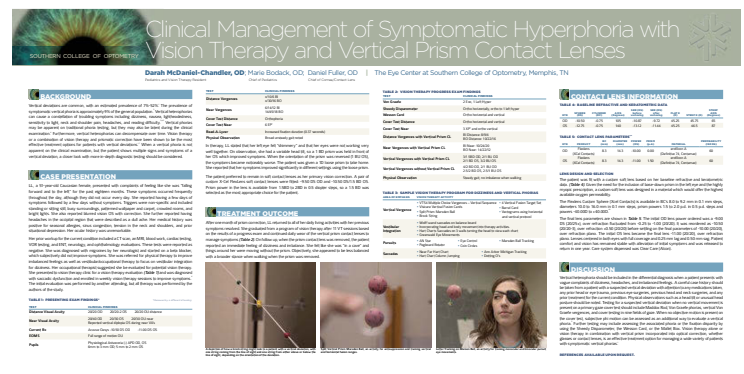
Clinical Management of Symptomatic Hyperphoria with Vision Therapy and Vertical Prism Contact Lenses

Darah McDaniel-Chandler, OD
Marie Bodack, OD
Daniel Fuller, OD



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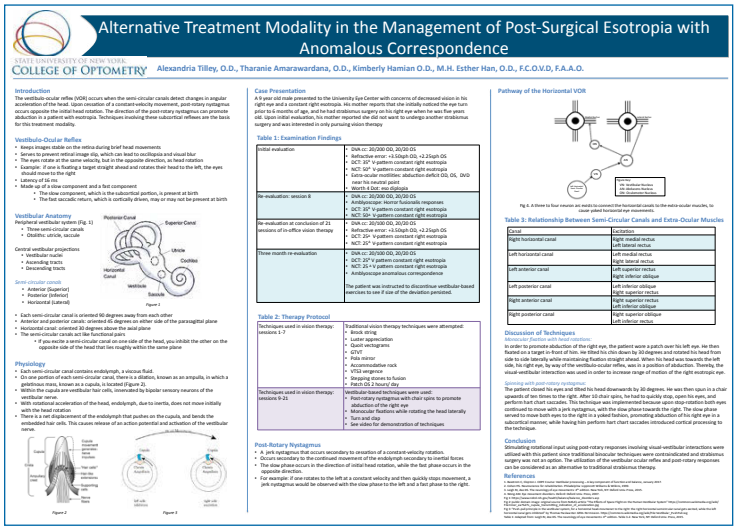
Alternative Treatment Modality in the Management of Post-Surgical Esotropia with Anomalous Correspondence

Alexandria Tilley, OD
Tharanie Amarawardana, OD
Kimberly Hamian OD
M.H. Esther Han, OD, FCOVD, FAAO



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"E" is for "Exotropia": A successful course of vision therapy in a preschool age child

Brandi Stewart, OD
Linh Nguyen, OD
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Designing optometric vision therapy for basic exotropia: Quantification of techniques emphasized in the final phases of training

Elaine C. Ramos OD
Nathalia Broderick OD
M.H. Esther Han OD FCOVD FAAO

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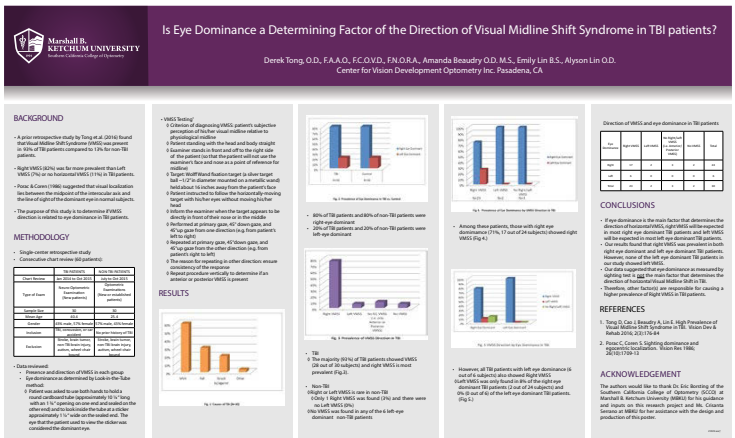
Is Eye Dominance a Determining Factor of the Direction of Visual Midline Shift Syndrome in TBI patients?

Derek Tong, OD, FAAO, FCOVD, FNORA
Amanda Beaudry OD, MS
Emily Lin BS
Alyson Lin OD



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Private Practice Residency Program: Pediatric Optometry & Vision Therapy/Neuro-Optometry

Derek Tong, OD, FAAO , FCOVD, FNORA

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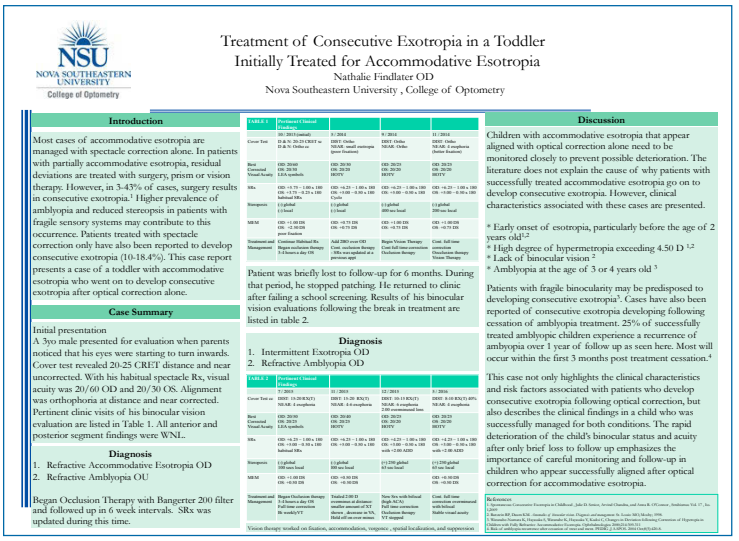
Treatment of Consecutive Exotropia in a Toddler Initially Treated for Accommodative Esotropia

Nathalie Findlater, OD



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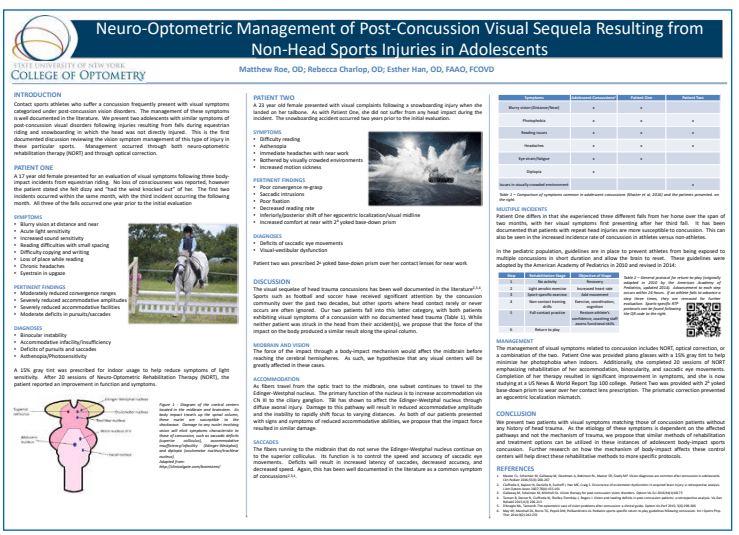
Neuro-Optometric Management of Post-Concussion Visual Sequela Resulting from Non-Head Sports Injuries in Adolescents

Matthew Roe, OD
Rebecca Charlop, OD
Esther Han, OD, FAAO, FCOVD



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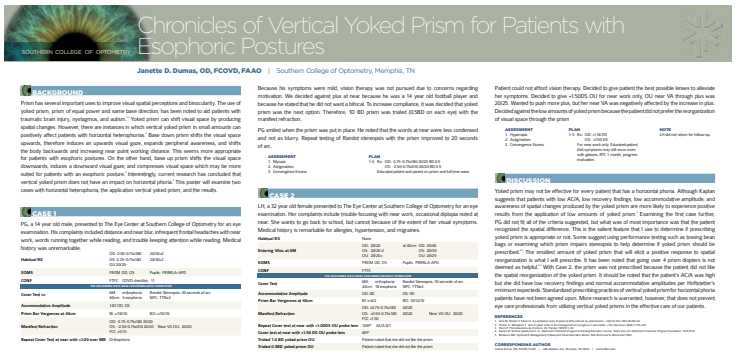
Chronicles of Vertical Yoked Prism for Patients with Esophoric Postures

Janette D. Dumas, OD, FCOVD, FAAO



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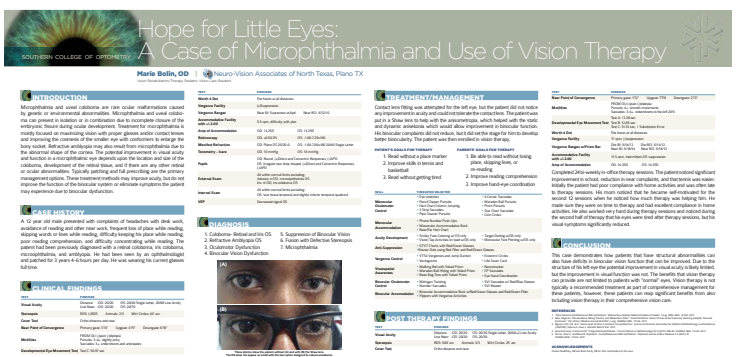
Hope for Little Eyes: A Case of Microphthalmia and Use of Vision Therapy

Marie Bolin, OD



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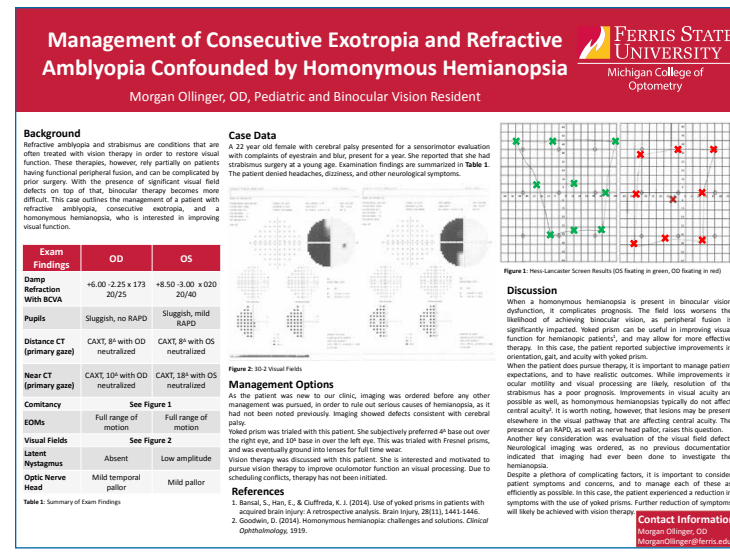
Management of Consecutive Exotropia and Refractive Amblyopia Confounded by Homonymous Hemianopsia

Morgan Ollinger, OD



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Development of a New Visual Perceptual Test for Preschool Children Using a Tablet PC: A Pilot Study

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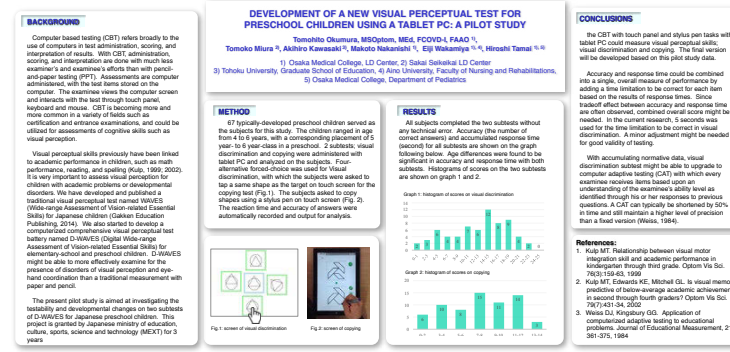

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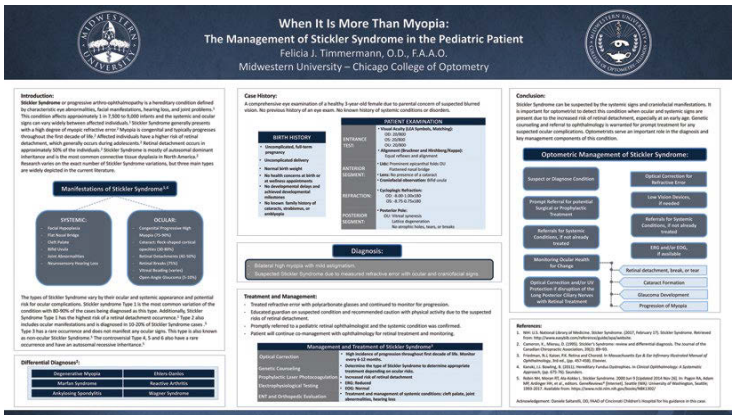
When It Is More than Myopia: The Management of Stockler Syndrome in the Pediatric Patient

Flicia J. Timmermann, OD, FAAO



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11-year-old Patient with Retinitis Pigmentosa Mistaken for a Malingerer: Lessons Learned

Rebecca Charlop OD
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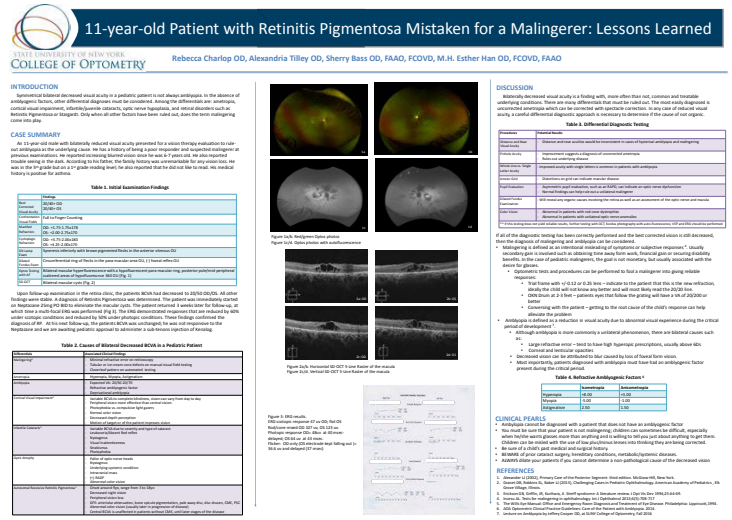
Sherry Bass OD, FAAO, FCOVD
M.H. Esther Han OD, FCOVD, FAAO



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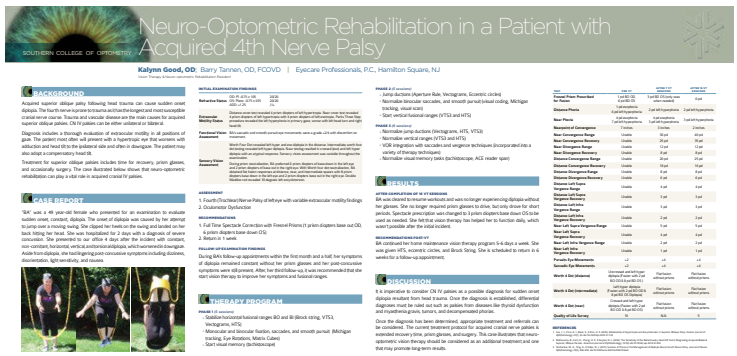
Neuro-Optometric Rehabilitation in a Patient with Acquired 4th Nerve Palsy

Kalynn Good, OD
Barry Tannen, OD, FCOVD



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Converging Cars: Adult Acute Onset Diplopia and the Treatment and Management with Fresnel Prism

Jessica Min, OD
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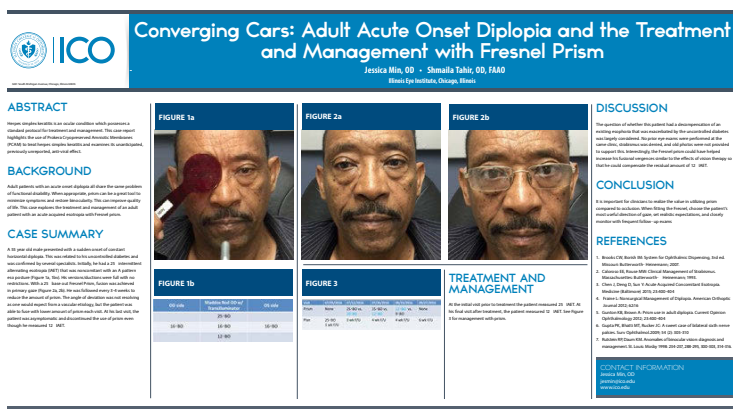

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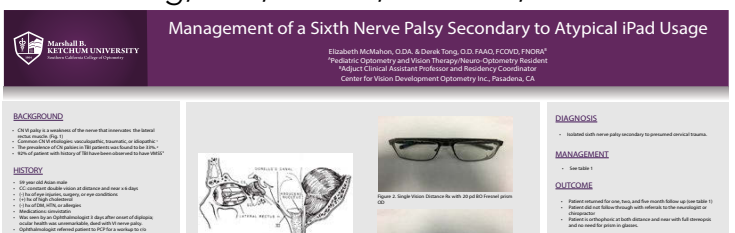
Management of a Sixth Nerve Palsy Secondary to Atypical iPad Usage

Elizabeth McMahon, OD
Derek Tong, OD, FAAO, FCOVD, FNORA



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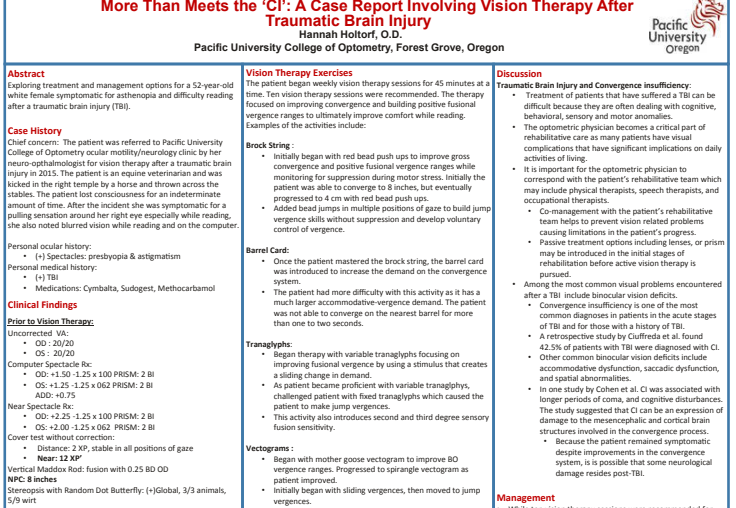
More Than Meets the 'CI': A Case Report Involving Vision Therapy After Traumatic Brain Injury

Hannah Holtorf, OD



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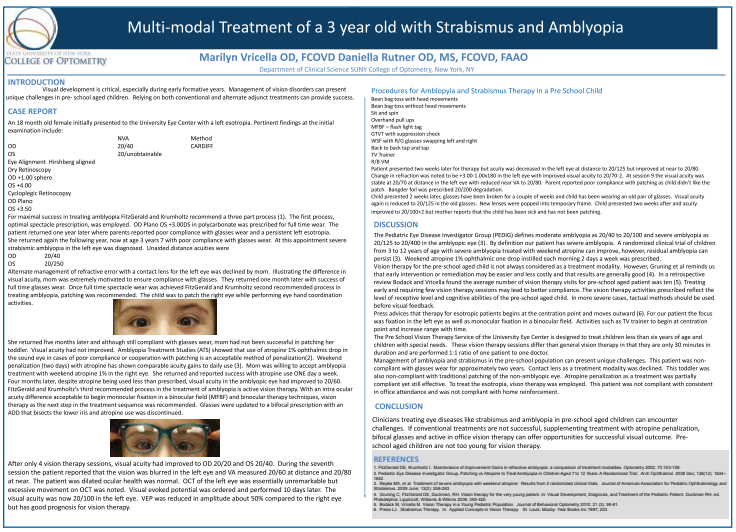
Multi-modal Treatment of a 3 year old with Strabismus and Amblyopia

Marilyn Vricella, OD, FCOVD
Daniella Rutner, OD, MS, FCOVD, FAAO



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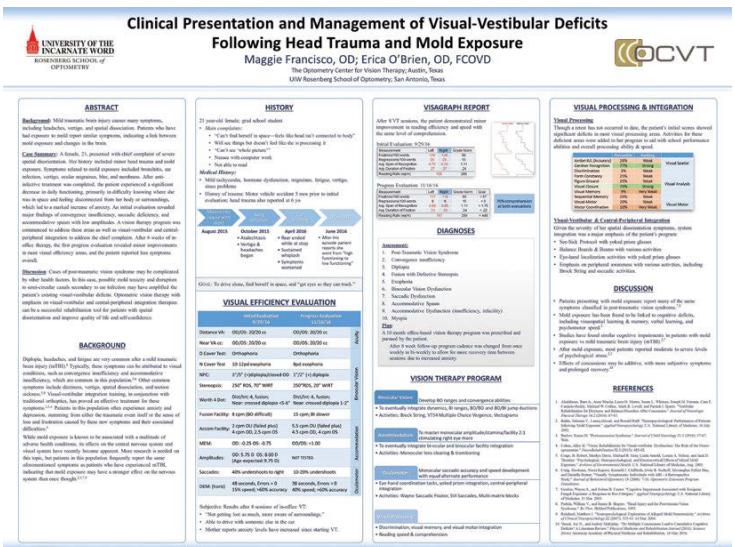
Clinical Presentation and Management of Visual-Vestibular Deficits Following Head Trauma and Mold Exposure

Maggie Francisco, OD
Erica O'Brien, OD, FCOVD



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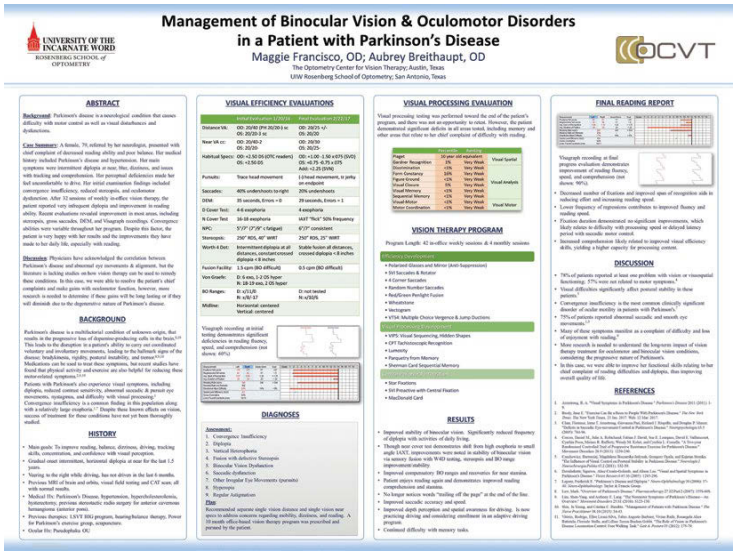
Management of Binocular Vision & Oculomotor Disorders in a Patient with Parkinson's Disease

Maggie Francisco, OD
Aubrey Breithaupt, OD



Management of Binocular Vision & Oculomotor Disorders in a Patient with Parkinson's Disease

Maggie Francisco, OD; Aubrey Breithaupt, OD

The Optometry Center for Vision Therapy: Austin, Texas

UIW Rosenberg School of Optometry: San Antonio, Texas

ABSTRACT

VISUAL EFFICIENCY EVALUATIONS

VISUAL PROCESSING EVALUATION

FINAL READING REPORT

BACKGROUND

VISION THERAPY PROGRAM

DISCUSSION

HISTORY

DIAGNOSES

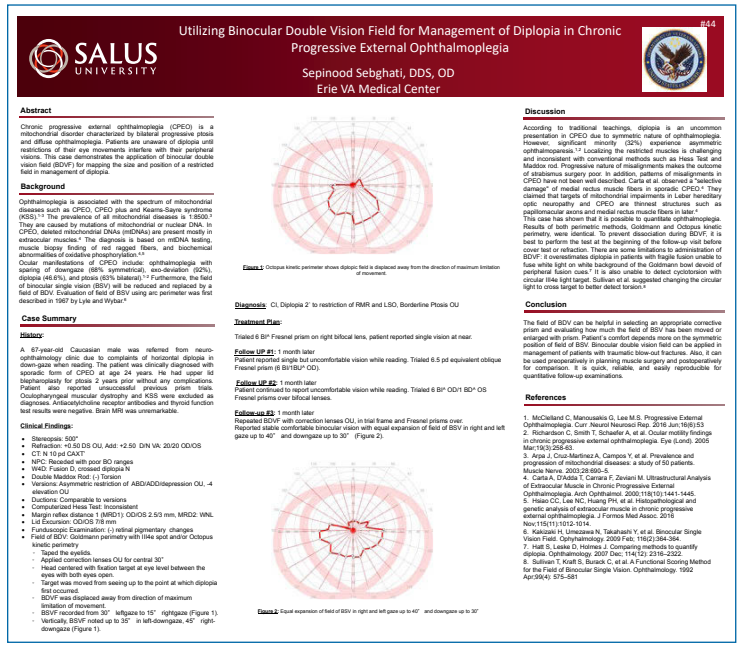
RESULTS

REFERENCES

Contact Author:

Utilizing Binocular Double Vision Field for Management of Diplopia in Chronic Progressive External Ophthalmoplegia

Sepinood Sebghati, DDS, OD



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Utilizing Binocular Double Vision Field for Management of Diplopia in Chronic Progressive External Ophthalmoplegia

Sepinood Sebghati, DDS, OD

Erie VA Medical Center

Abstract

Background

Case Summary

Discussion

Conclusion

References

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Applying Narrative and Integrative Medicine to Neurology Referrals for Visual Disorders in Post-Concussion Syndrome

Darrell G. Schlange, OD
Contact Author:

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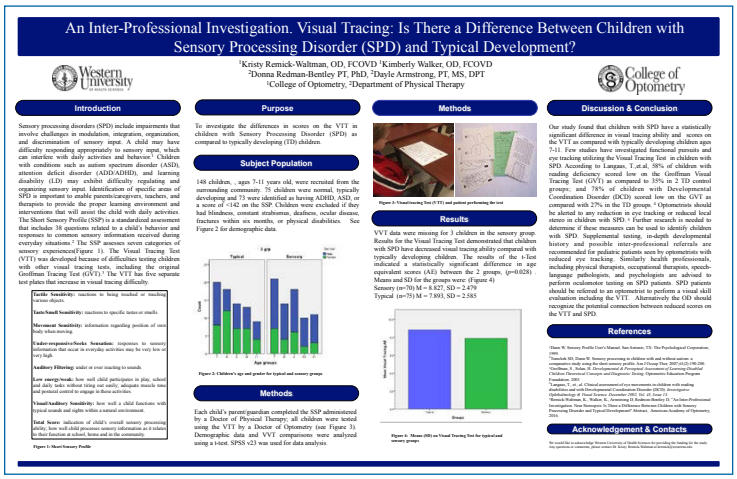
An Inter-Professional Investigation. Visual Tracing: Is There a Difference Between Children with Sensory Processing Disorder (SPD) and Typical Development?

Kristy Remick-Waltman, OD, FCOVD
Kimberly Walker, OD, FCOVD
Donna Redman-Bentley PT, PhD
Dayle Armstrong, PT, MS, DPT



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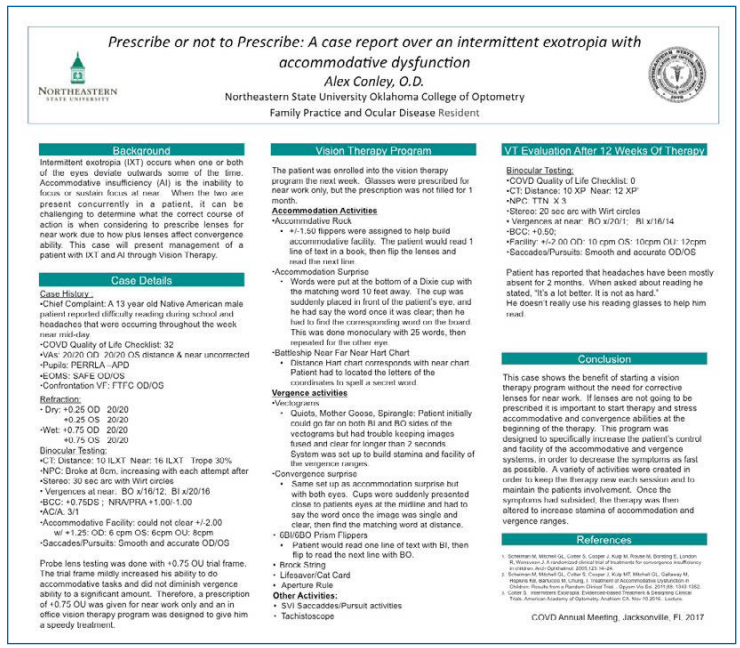
Prescribe or not to Prescribe: A case report over an intermittent exotropia with accommodative dysfunction

Alex Conley, OD



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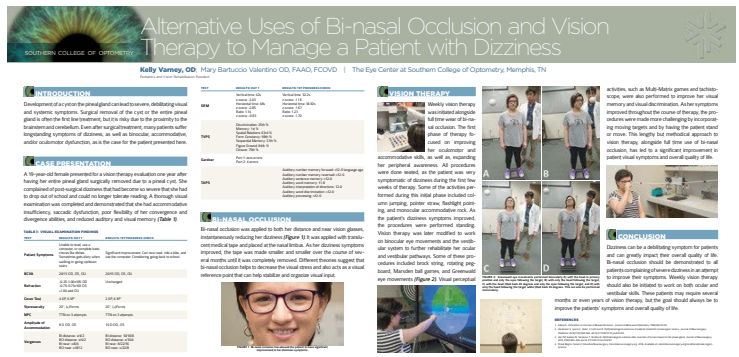
Alternative Uses of Bi-nasal Occlusion and Vision Therapy to Manage a Patient with Dizziness

Kelly Varney, OD
Mary Bartuccio Valentino OD, FAAO, FCOVD



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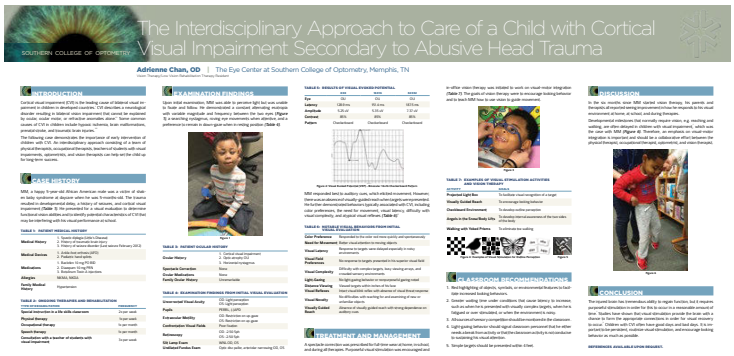
The Interdisciplinary Approach to Care of a Child with Cortical Visual Impairment Secondary to Abusive Head Trauma

Adrienne Chan, OD



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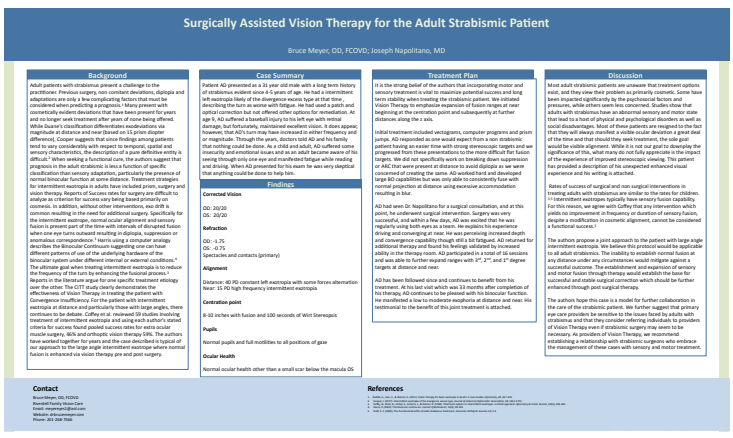
Surgically Assisted Vision Therapy for the Adult Strabismic Patient

Bruce Meyer, OD, FCOVD
Joseph Napolitano, MD



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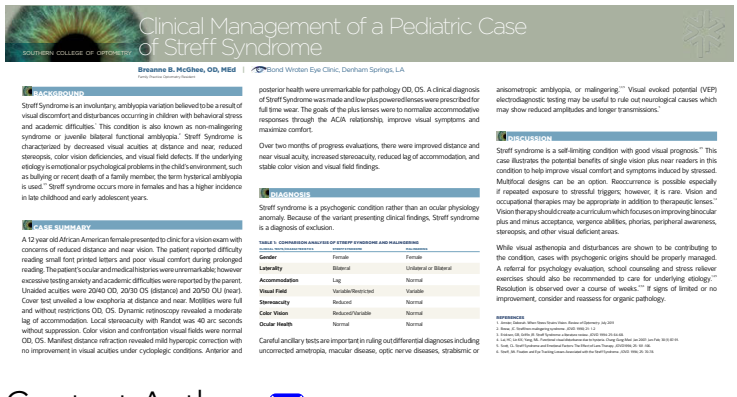
Clinical Management of a Pediatric Case of Streff Syndrome

Breanne B. McGhee, OD, MEd



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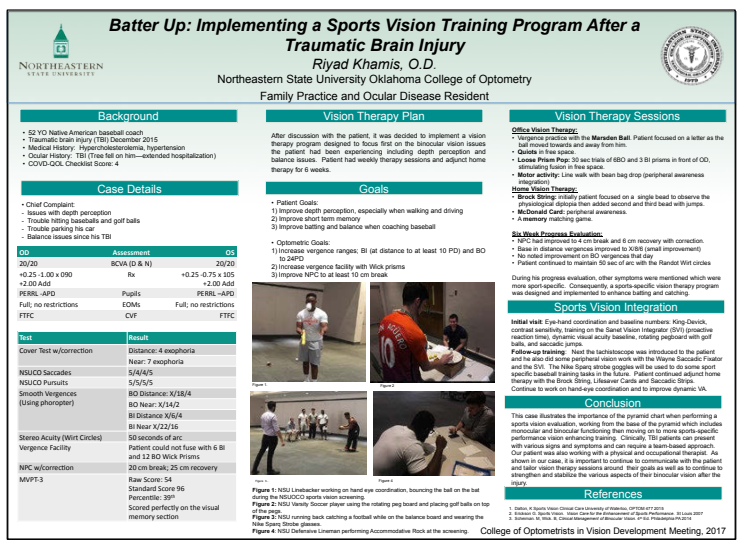
Batter Up: Implementing a Sports Vision Training Program After a Traumatic Brain Injury

Riyad Khamis, OD



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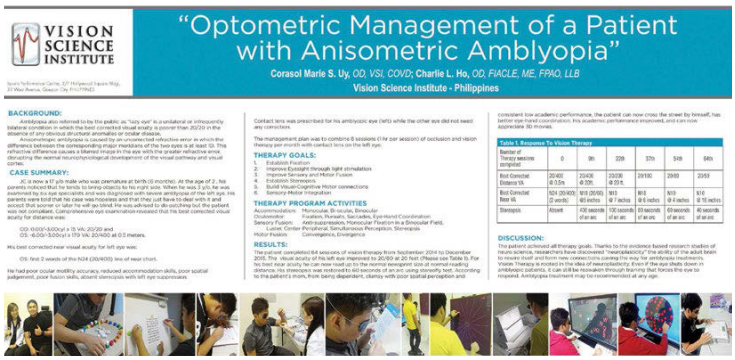
Optometric Management of a Patient with Anisometric Amblyopia

Corasol Marie S. Uy, OD, VSI, COVD
Charlie L. Ho, OD, FIACLE, ME, FPAO, LLB



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Improving Eye Contact of a Childwith Autism Spectrum Disorder through Vision Therapy

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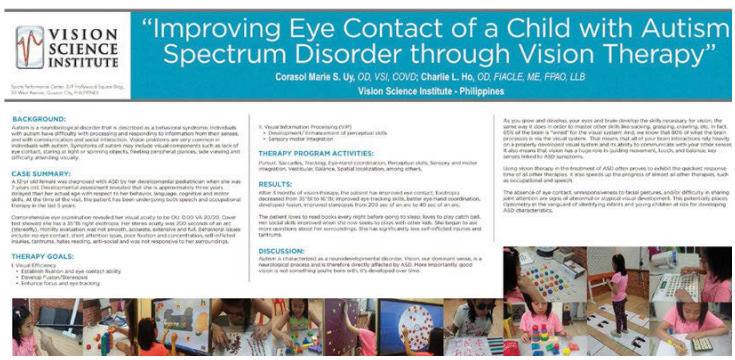

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Validation of iPad Vision Diagnostics

Marc B. Taub, OD, MS, FAAO, FCOVD
Kara Tison, OD, FAAO
Jenny Rider
April Smith
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Management of Post-Concussion Pattern Glare with Optometric Vision Therapy: A Case Report

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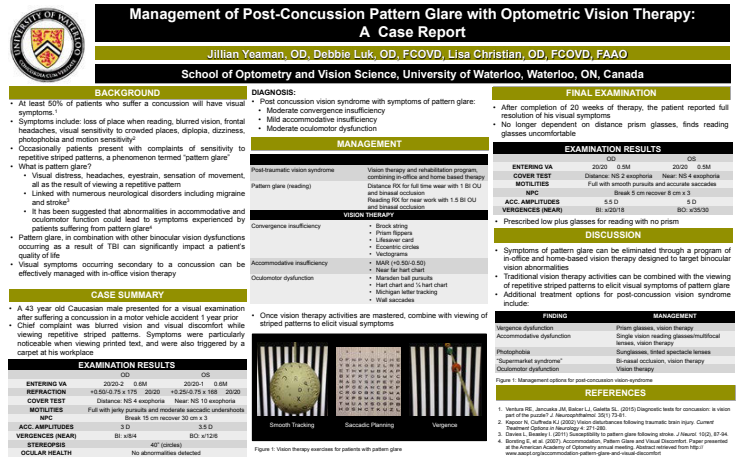
Debbie Luk, OD, FCOVD
Lisa Christian, OD, FCOVD, FAAO



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Our Children's Vision Inaugural Event in The United States: Vision Program in Gary, Indiana

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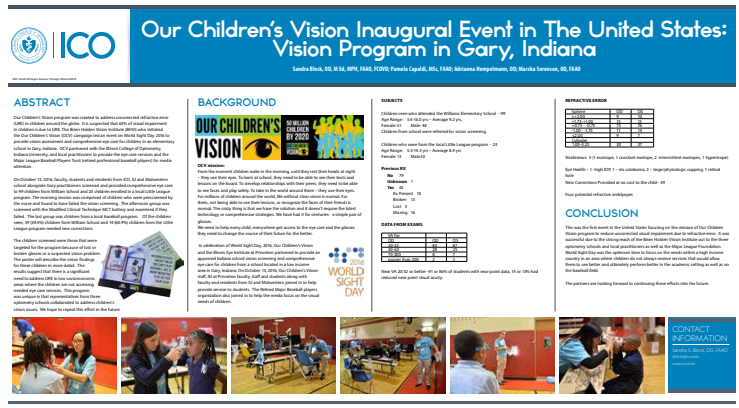
Adrianna Hempelmann, OD
Marsha Sorenson, OD, FAAO



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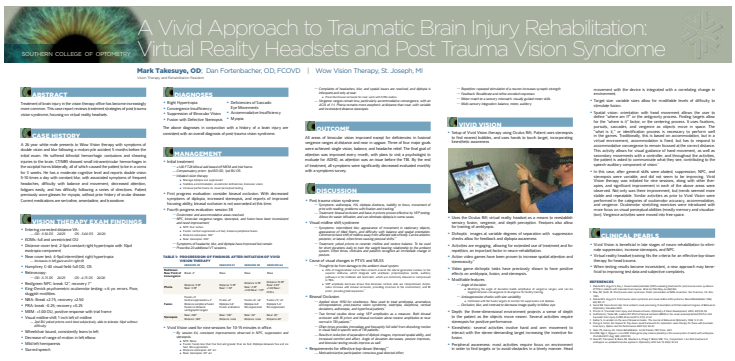
A Vivid Approach to Traumatic Brain Injury Rehabilitation: Virtual Reality Headsets and Post Trauma Vision Syndrome

Mark Takesuye, OD
Dan Fortenbacher, OD, FCOVD



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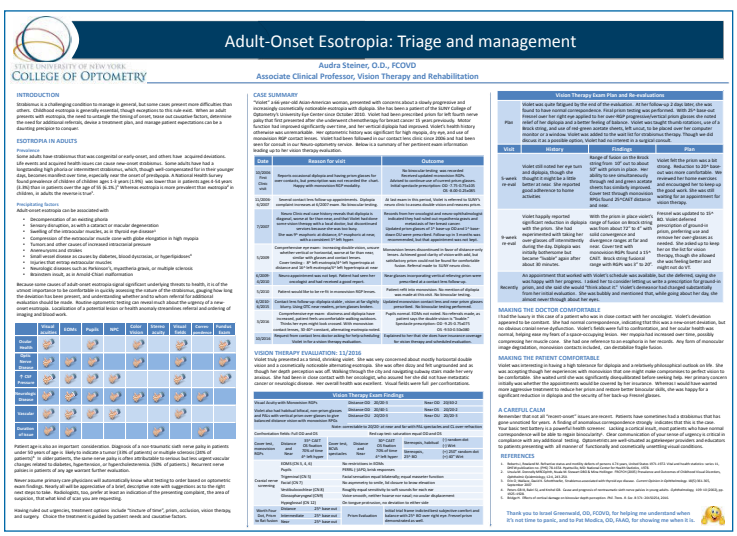
Adult-Onset Esotropia: Triage and Management

Audra Steiner, OD, FCOVD



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Vestibular Neuritis and Vision Therapy

Dominick M Maino, OD, MEd, FAAO, FCOVD-A

Kelsey Frederick; Stephanie Lyons
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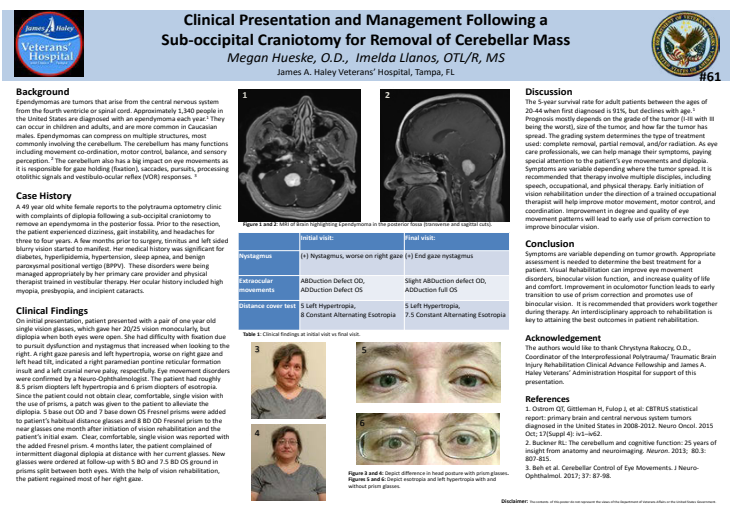
Clinical Presentation and Management Following a Sub-occipital Craniotomy for Removal of Cerebellar Mass

Megan Hueske, OD
Imelda Llanos, OTL/R, MS



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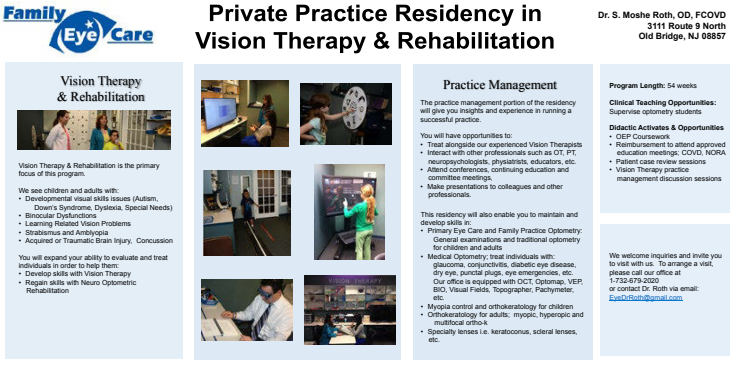
Private Practice Residency in Vision Therapy & Rehabilitation

S. Moshe Roth, OD, FCOVD



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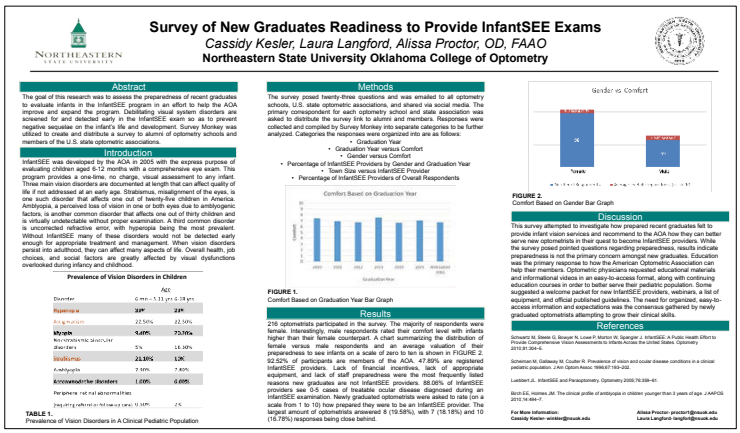
Survey of New Graduates Readiness to Provide InfantSEE® Exams

Cassidy Kesler
Laura Langford
Alissa Proctor, OD, FAAO



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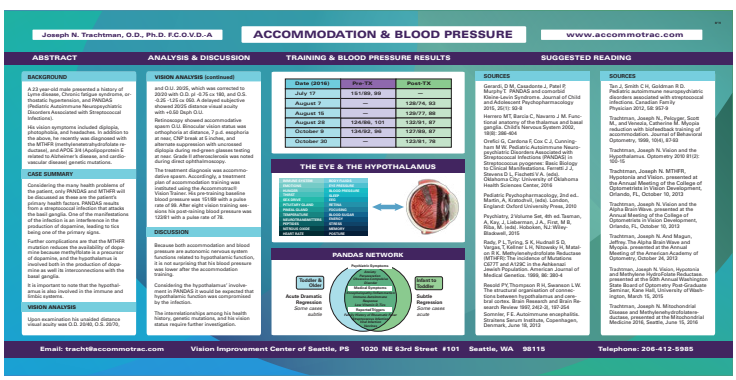
Accommodation & Blood Pressure

Joseph N. Trachtman, OD, PhD, FCOVD-A



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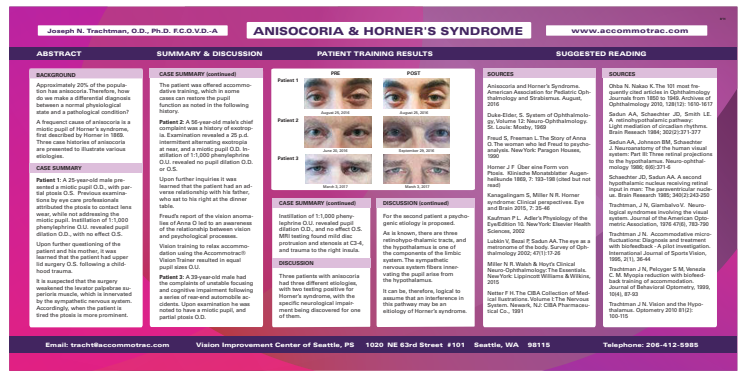
Anisocoria & Horner's Syndrome

Joseph N. Trachtman, OD, PhD, FCOVD-A



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Screening for Suboptimal Learning Related Vision Skills in a Graduate School Population

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VIVID-Stereoscope: Validation of iPad Vision Stereoscope vs. the Keystone Telebinocular

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Marc B. Taub, OD, MS, FAAO, FCOVD, FNAP
April Smith; Jenny Rider; Renee Prosser
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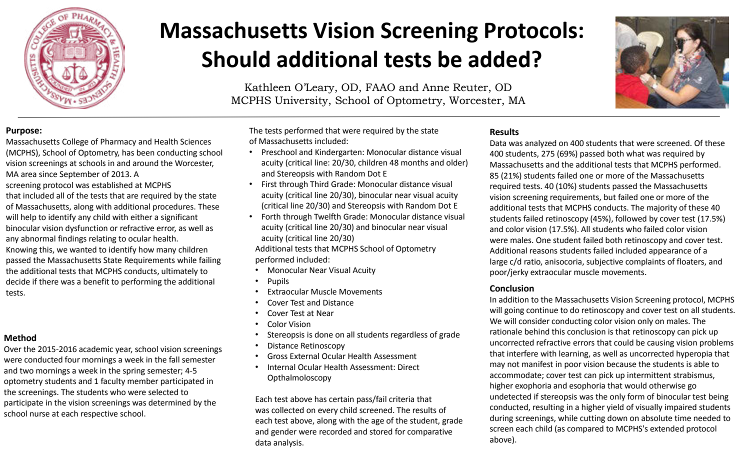
Massachusetts Vision Screening Protocols: Should additional tests be added?

Kathleen O'Leary, OD, FAAO
Anne Reuter, OD



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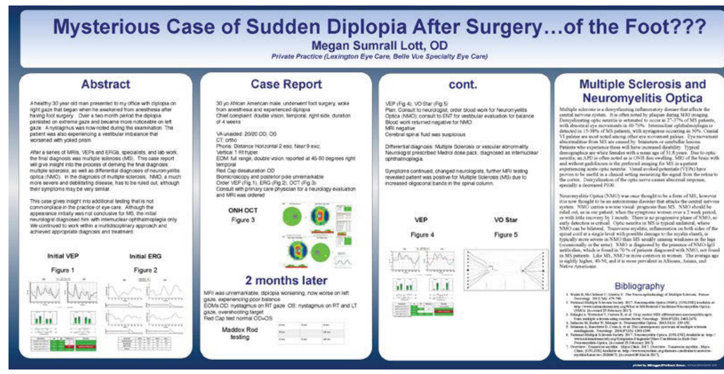
Mysterious Case of Sudden Diplopia After Surgery ... of the Foot???

Megan Sumrall Lott, OD



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Vestibular Therapy Techniques to Treat Esotropia

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