

MANAGEMENT OF VISUAL SYMPTOMS

Siegal Rare
Neuroimmune
Association

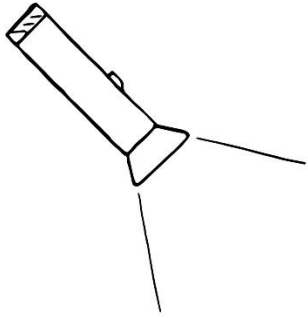
Peter Sguigna MD &
Kory Cummings OD



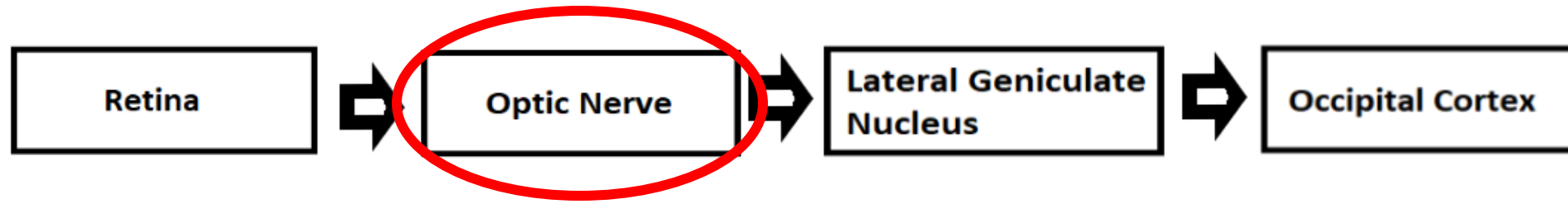
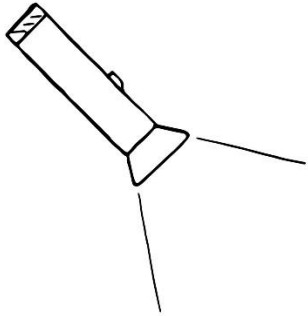
THE IDENTITY LANDSCAPE

- Visual symptoms are exceedingly common if not mandatory in:
 - Idiopathic Optic Neuritis
 - NMOSD
 - MOGAD
 - ADEM
- Visual symptoms more often localize to the optic nerve
- In neuroimmune conditions, this most often is called or attributed to optic neuritis

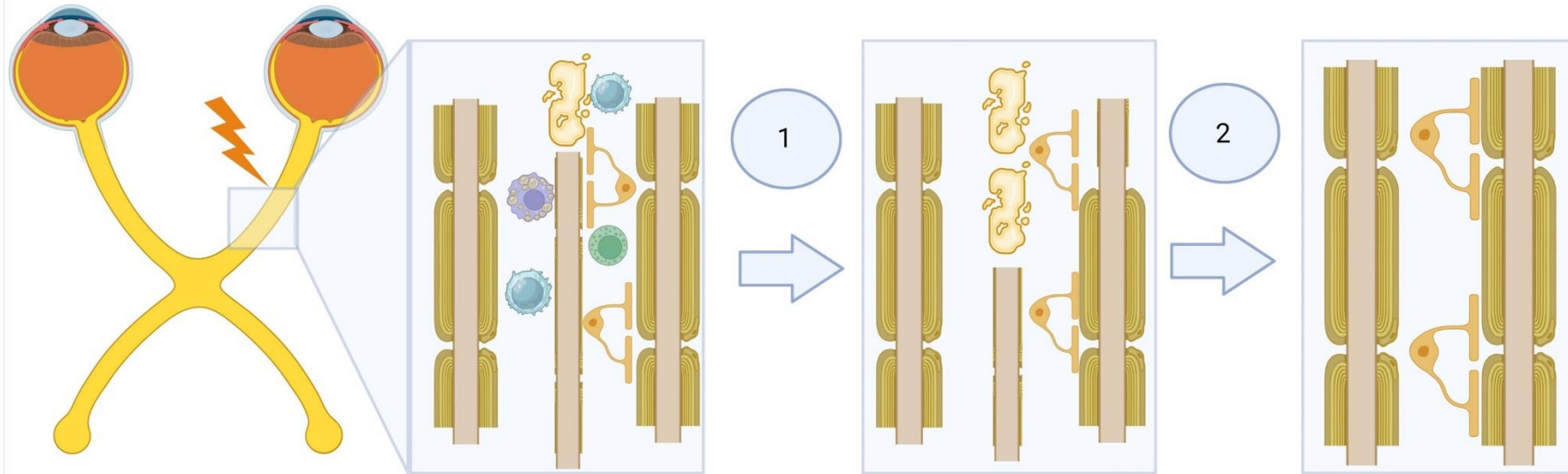
AFFERENT VISUAL SYSTEM



AFFERENT VISUAL SYSTEM



OPTIC NEURITIS

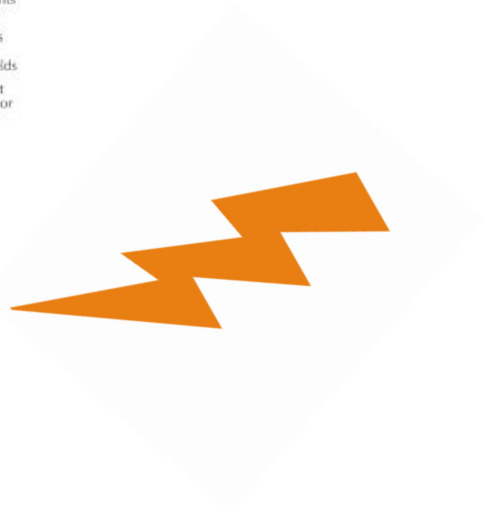
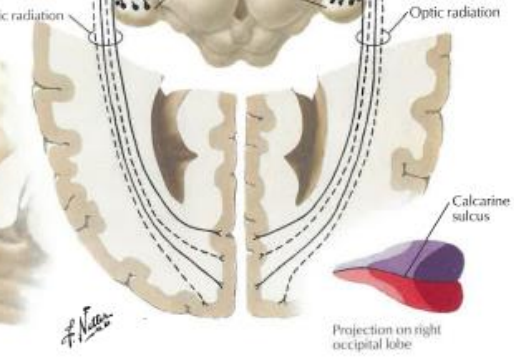
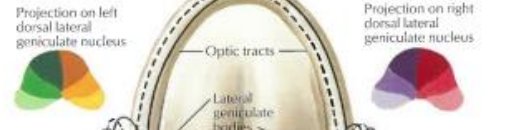
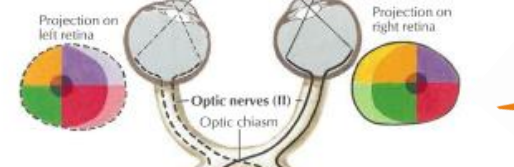
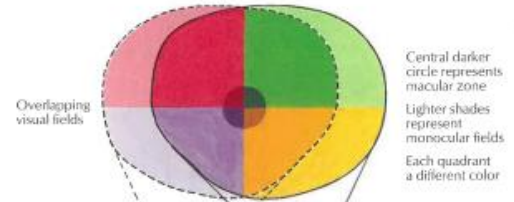


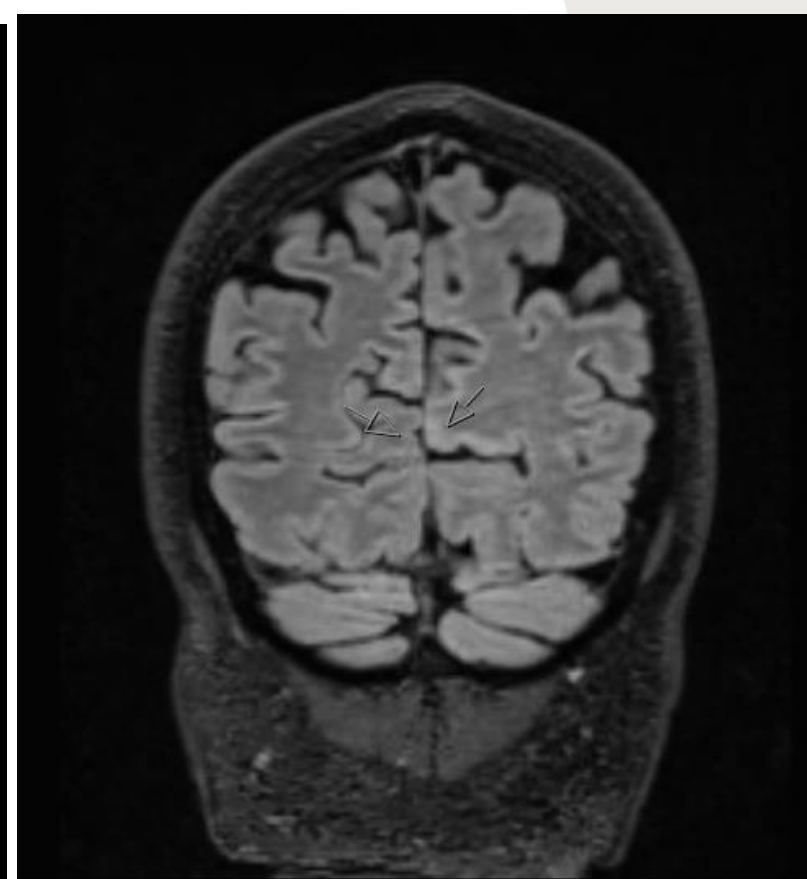
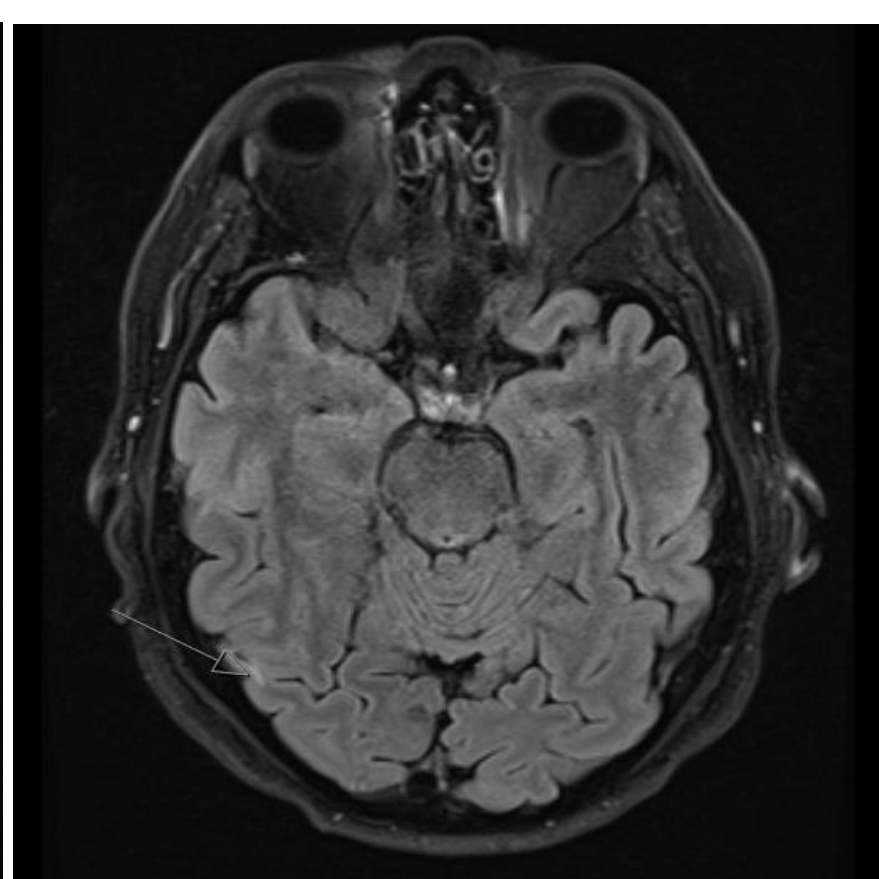
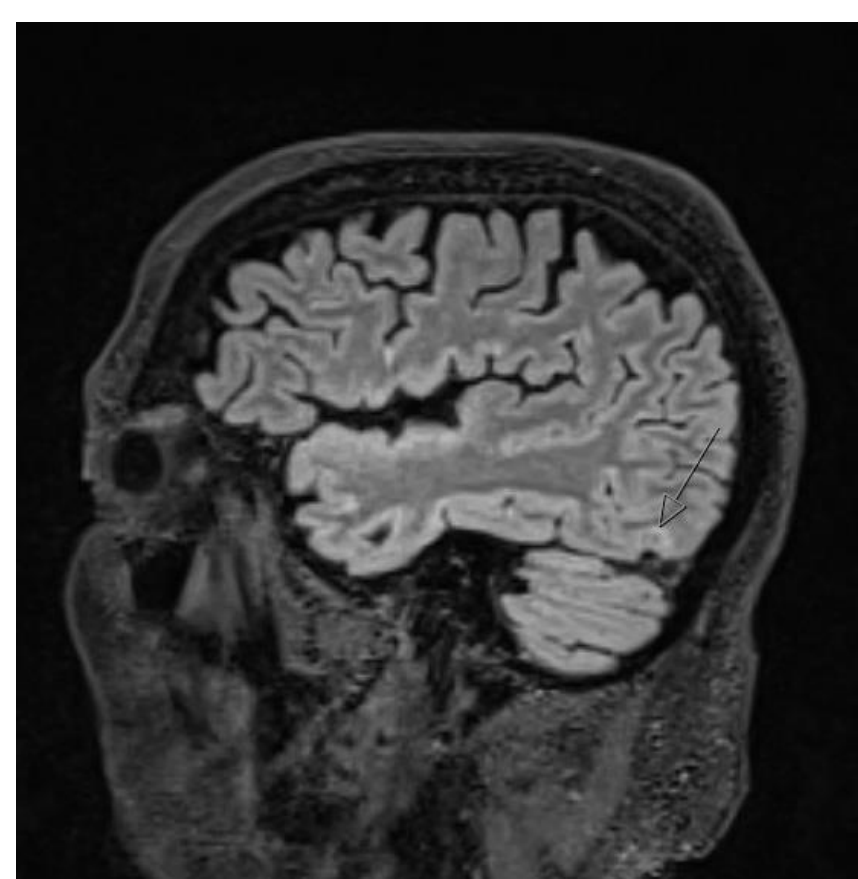
Optic Nerve (II) (Visual Pathway): Schema



Structure of retina: schema

- A Amacrine cells
- B Bipolar cells
- C Cones
- G Ganglion cells
- H Horizontal cells
- P Pigment cells
- R Rods





OPTIC NEURITIS SYMPTOMS

- Vision Loss (Measurable)
- Pain, particularly with eye movement
 - Photophobia★
 - Palinopsia★
 - Nyctalopia★
 - Contrast Sensitivity★
 - Headache★
 - Entoptic Phenomenon★
 - Moore's Lightning Streaks
 - Purkinje Trees
 - Blue field entoptic phenomenon
 - Phosphenes

OPTIC NEURITIS SUBTLETIES

- A lesion that affects less than 50% of the optic nerve can have no effect on:
 - Visual fields (to confrontation)
 - Visual acuity (high contrast)
 - Contrast (CST)
 - Color (Ishihara plates)
 - Disc appearance (direct or indirect fundoscopy)

The New England Journal of Medicine

©Copyright, 1992, by the Massachusetts Medical Society

Volume 326

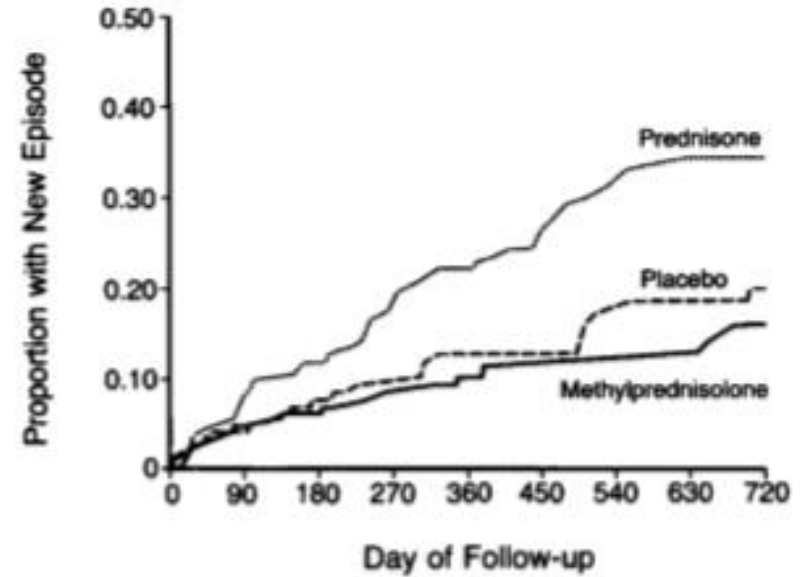
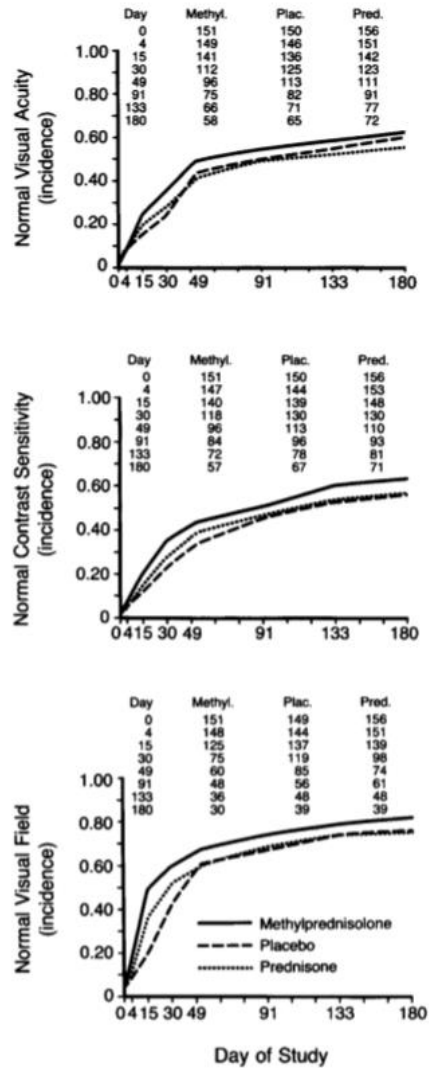
FEBRUARY 27, 1992

Number 9

A RANDOMIZED, CONTROLLED TRIAL OF CORTICOSTEROIDS IN THE TREATMENT OF ACUTE OPTIC NEURITIS

ROY W. BECK, M.D., PATRICIA A. CLEARY, M.S., MALCOLM M. ANDERSON, JR., P.A.C.,
JOHN L. KELTNER, M.D., WILLIAM T. SHULTS, M.D., DAVID I. KAUFMAN, D.O., EDWARD G. BUCKLEY, M.D.,
JAMES J. CORBETT, M.D., MARK J. KUPERSMITH, M.D., NEIL R. MILLER, M.D., PETER J. SAVINO, M.D.,
JOHN R. GUY, M.D., JONATHAN D. TROBE, M.D., JOHN A. MCCRARY, III, M.D., CRAIG H. SMITH, M.D.,
GEORGIA A. CHROUSOS, M.D., H. STANLEY THOMPSON, M.D., BARRETT J. KATZ, M.D.,
MICHAEL C. BRODSKY, M.D., JAMES A. GOODWIN, M.D., CONSTANCE W. ATWELL, PH.D.,
AND THE OPTIC NEURITIS STUDY GROUP*

ONTT

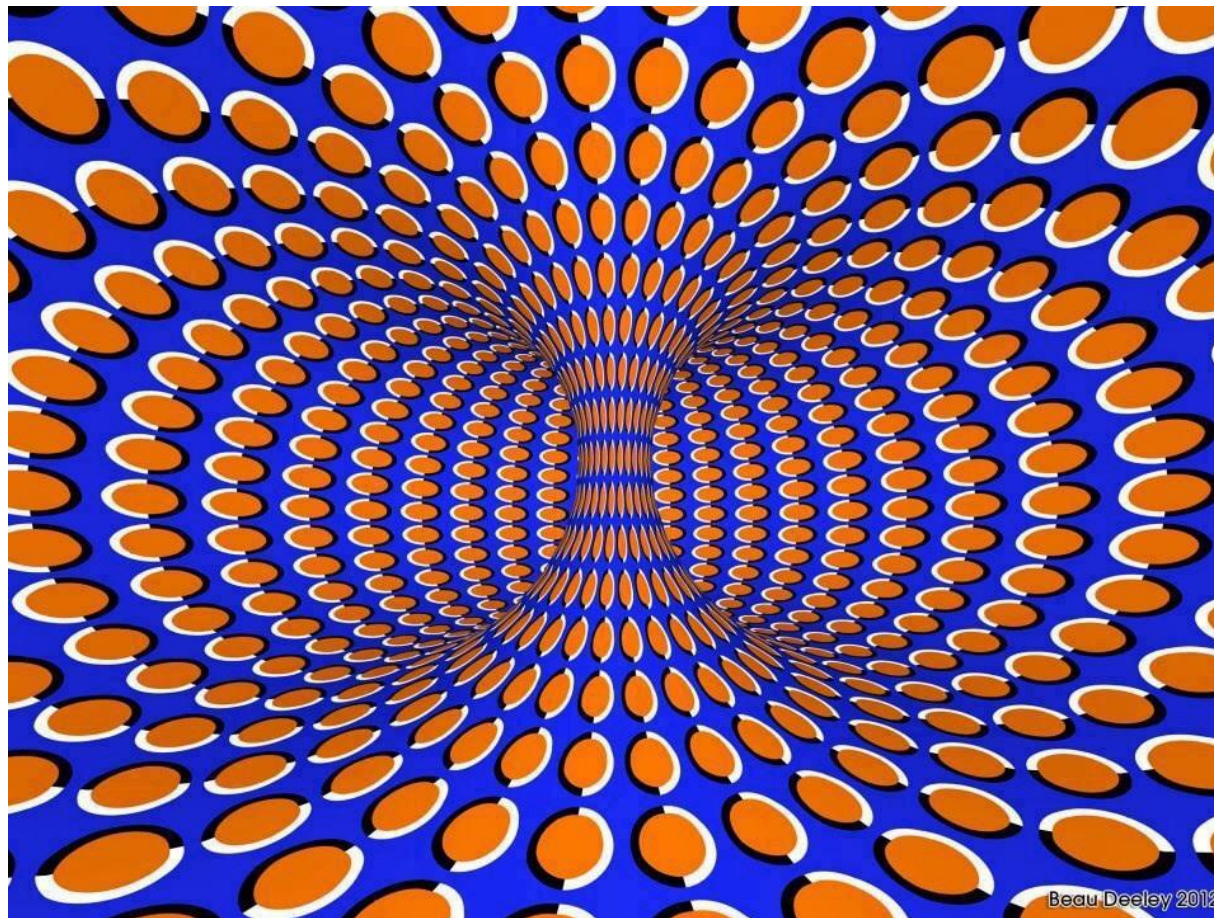


Methylpred.	151	140	126	112	91	60	60	60	37
Prednisone	156	141	122	102	86	60	54	52	40
Placebo	150	140	120	105	86	62	58	57	44

Figure 2. Kaplan-Meier Curves Showing Cumulative Incidence of New Episodes of Optic Neuritis in Either Eye, According to Treatment Group.

The number of patients in each treatment group who were still at risk for a first new episode of optic neuritis in either eye at the beginning of each three-month period is shown at the bottom of the figure. The curves for the oral-prednisone and placebo groups differed significantly according to the Mantel log-rank test (chi-square = 5.20, $P = 0.02$), but the curves for the intravenous-methylprednisolone and placebo groups did not (chi-square = 0.44, $P = 0.51$).

VISION DISTURBANCE



OPTIC NEURITIS SYMPTOMS

- Vision Loss (Measurable)
- Pain, particularly with eye movement
 - Photophobia★
 - Palinopsia★
 - Nyctalopia★
 - Contrast Sensitivity★
 - Headache★
 - Entoptic Phenomenon★
 - Moore's Lightning Streaks
 - Purkinje Trees
 - Blue field entoptic phenomenon
 - Phosphenes

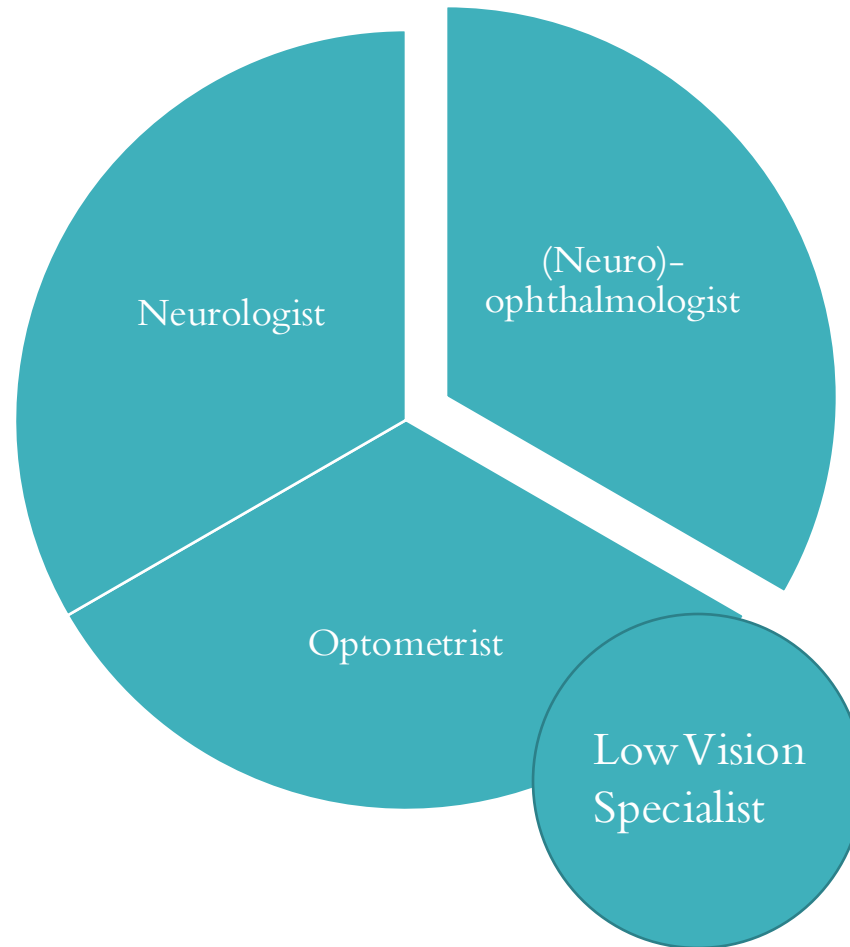
SYMPTOM MANAGEMENT

- Immune therapy
- Corticosteroids AKA steroids (IV vs. po vs. type)
- PLEX
- IVIG
- Cyclophosphamide
- Many others



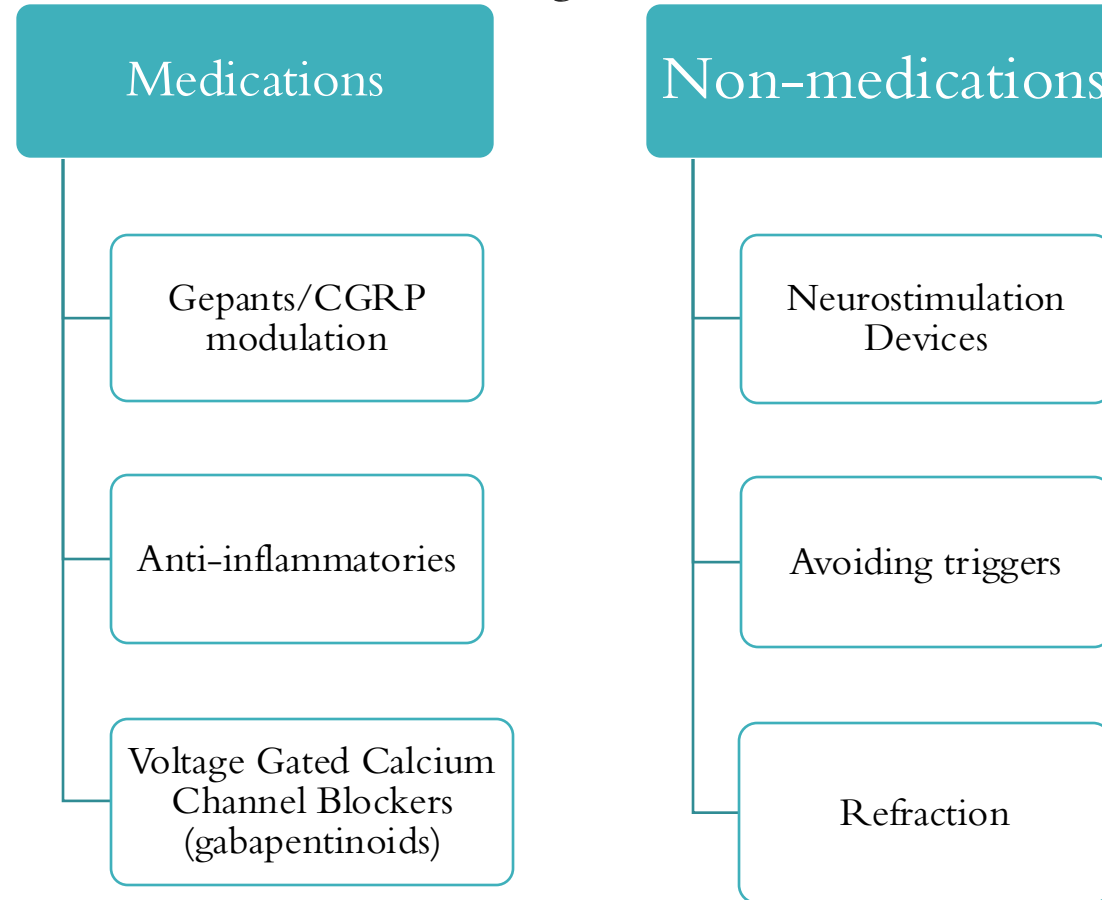
TIMELY-PLEX will determine if early PLEX leads to better outcomes and helps identify patients that would most benefit from early PLEX.

TREATMENT TEAM



EYE PAIN / HEADACHE

- Orbital inflammation AND/OR Meningeal Irritation



PHOTOPHOBIA

- Treatment of headache/eye pain
- CGRP modulations/gepants
- Triptans
- Botox
- Certain lenses and filters have mixed data (FL-41)



Setu nutrition

PALINOPSIA

Palinopsia



Palinopsia refers to a pathological group of visual symptoms in which there is an abnormal persistence or recurrence of an image in time. Palinopsia derives its name from the Greek word *palin* which means "again" and *opsis* which means "seeing."



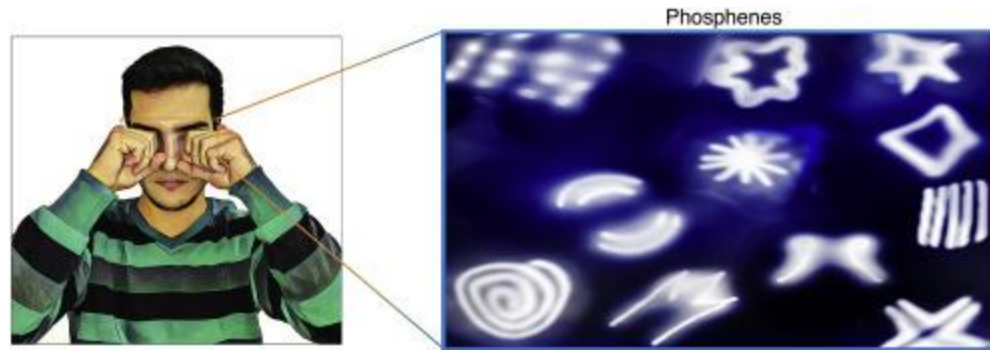
American Academy of
Ophthalmology

Read More →

ENTOPTIC PHENOMENON



Dallas Morning News



Salari et al. 2017. *Progress in Retinal and Eye Research*



wikipedia

Neurosensory
Research Foundation



OTHERS

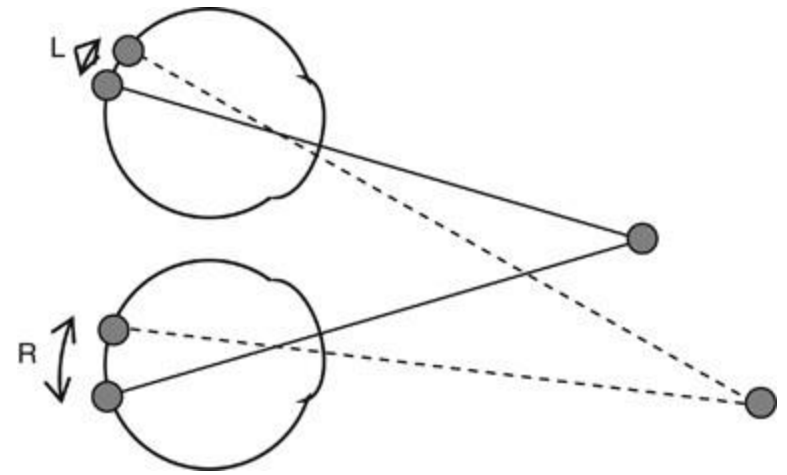
- Charles Bonnet Syndrome – visual hallucinations, sometimes well formed, often in the setting of significant vision loss
- Peduncular Hallucinosis – Sometimes brain lesions outside the typical vision related areas also cause hallucinations



DOUBLE VISION



American Optometric Association



Read et al. 2015 *Eye*

VISION LOSS



Elma retina group

COMMISSION FOR THE BLIND

- Blindness is often defined at the state, and federal level (20/200 BCVA with better eye, with various visual field definitions)
- Each State has commission for the blind (or analogous government body, typically under its HHS), that's a great resource, particularly for low vision specialists
- Lighthouse for the Blind, and many others

LOW VISION OPTOMETRISTS

- Dallas/Fort Worth Low Vision Optometrists
- Kory Cummings, OD (Fort Worth) 817-294-4834 www.weloveyoureyes.com
- Amy Burchman, OD (Farmers Branch-Beacon Vision Center) 214-420-5090
- Lauren Bailey, OD (Plano) 469-999-2747 www.westplanoaesthetics.com
- Center for Vision Health (Dallas Services) 214-828-9900
www.centerforvisionhealth.org
- Matthew Lyons, OD (Allen) 214-383-5400 www.fairvieweye.com