

Sudden loss of vision in a preschool child

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- Two and half yrs old girl had acute watery diarrhea for one day managed with ofloxacin and ORS
- Two days later eventhough diarrhea got controlled received IVF in the nearby nursing home for few hours
- Fourth day after diarrhea when she got up in the morning, when she was offering food. mother recognized loss of vision from her behaviour

Clinical presentation

- No history of loss of consciousness, convulsion, trauma,
- On examination, child was anxious, trying to gather information from voice and other senses. Conscious, no other positive finding except loss of vision. Ambulant, DTJ normal. eye: external examination normal. Fundus – normal.
- No eschar. CVS, ABD, RS: examination not contributory

?

- **Where to treat?** Pediatric hospital and call the Ophthalmologist, plan for neuroimaging
- Or transfer to an ophthal centre and coordinate for pediatric help
- **Decision** – To reduce the time period shorter to start the treatment earlier
- Absence of systemic problems (No shock, LOC or respiratory or feeding issues)

Acute loss of vision?

- Referred to Ophthalmologist, Sankara nethralaya.
- Emergency admission was made
- MRI, neurophthalmic opinion obtained. Possibility of Retrobulbar Neuritis was made. This took 24 hrs.
- Referred back to Mehta

- Neuro opinion suggested CSF for oligoclonal bands.
- CSF analysis – normal. Also sent for oligoclonal bands. Negative .
- CRP, CBC, ESR, Electrolytes, Urea, cr, ,sugar , TORCH negative.
- Scrub typhus – negative.

Reterobulbar neuritis

Treatment

- IV Methyl prednisolone
- IV Azithromycin
- Supportive measures then,
- Followed by Oral prednisolone

- Child started identifying strangers to begin with, in 48 hrs
- Gradually vision improved
- Then started localizing and taking the objects
- Now the child is on oral steroids.

Course of I P stay

DD for acute visual loss

PAINFUL

- 1. Acute angle closure glaucoma
- 2. Optic neuritis
- 3. Anterior uveitis
- 4. Methanol, salicylate poisoning.

PAINLESS

- 1. Vessels occlusion
 - a. central retinal artery occlusion
 - b. central retinal vein occlusion
- 2. Hemorrhage
 - a. Vitreous hemorrhage
 - b. Retinal hemorrhage
- 3. Retinal detachment
- 4. Macular degeneration

Optic Neuritis

- Inflammatory process involving the optic nerve.
- Retrobulbar ON
Optic neuritis involving optic nerve behind the globe.
- Pathophysiology
cross reaction of viral epitopes & host epitopes.

Adult vs pediatric

Adult ON

- U/L
- Retrobulbar optic neuritis
- commonly associated with pain on movements
- Most often idiopathic
- High probability of recurrent demyelinating events
MS

Pediatric ON

- B/L
- Papillitis
- Commonly associated with headache
- Most often post infectious or postimmunization
- Low Probability of recurrent demyelinating events
MS

Clinical features

- Over hours or days
- Unilateral or bilateral
- Painful or painless
- Subtle or profound
- Triad of symptoms: Loss of vision, dyschromatopsia and eye pain
- Mean age 3rd decade (From 1st year to 7th decade)

Causes

- Optic neuritis-Recent immunization or infection
- Others
- Neuromyelitis optica (devic's disease)
- First episode-Multiple sclerosis
- Vasculitis_SLE
- Associated with Bee and wasp stings

- DRUGS
 - High dose of chloramphenicol
 - Ethambutol

- TOXINS: Lead, etc.,

- DIAGNOSIS

Visual acuity testing, pupillary testing, visual field testing, colour vision testing.

- Ophthalmoscopy direct & indirect

- MRI brain.

TREATMENT REGIMEN

- Three days of IV steroids followed by 11 days of oral steroids.

- To report two cases of optic neuritis with onset less than 24 hours following
- measles-rubella (MR) vaccination.
- Two teenage patients developed acute optic neuritis 6 to 7 hours after MR
- Improved significantly with pulse intravenous methyl prednisolone
- It is a rare complication of MR vaccination and may occur early after immunization.

Siamak Moradian, Early Onset Optic Neuritis Following Measles-Rubella Vaccination J Ophthalmic Vis Res 2008; 3 (2): 118-122.

- 10 yrs old after 1 month of ATT including INH, presented with acute loss of vision. showed almost complete resolution following withdrawal of INH and administration of pyridoxine and steroids.

Bilateral Optic Neuritis due to Isoniazid (INH)
HS KULKARNI et al Indian Pediatrics VOLUME
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- There were 15 boys and 12 girls. The mean age was 10.9 years.
- In 37% an **infection within two weeks** prior. No vaccinations related
- Optic disc edema in 46%. MRI abn in 2/3
- Visual acuity improved in all but two
- Just one child converted to MS

Arq Neuropsychiatr 2001;59(2-B):311-317
THE CLINICAL PROFILE OF CHILDHOOD
OPTIC NEURITIS

- PICU team
- Dr.Meenakshi, Ophthalmologist, Sankara Nethralaya
- Dr.Mahesh Pediatric Neurologist

Acknowledgments