Papilledema Protocol

Ophthalmology examination shows bilateral disk edema in patient with signs/symptoms of elevated ICP

- Bilateral disk edema
- HVF 30-2 preferred - With or without visual field findings supportive (enlarged blind spot, nasal defects, peripheral constriction)
- OCT Cirrus optic nerve head scan with GCC preferred to set baseline for future comparison
- Documentary non-stereo Topcon disk photos preferred
- IF Pseudopapilledema suspected, order Spectralis Photo with M-Color and autofluorescence

1 Exclude other causes of bilateral disk edema with:

- VITALS – Documentation of blood pressure to exclude Malignant Hypertension
- Brain MRI with and without contrast (if no pregnancy, renal dysfunction, contrast allergy)
- Brain MRV to evaluate for venous sinus stenosis or thrombosis (may be without contrast)
- Labs: BUN, CR (MRI), ACE, RPR, Lyme titer/screen, consider ANA if autoimmune symptoms
- History of tetracycline, sulfa med, GH, steroid, Retina, Accutane, PCOS, Sleep Apnea
- IF Pseudopapilledema suspected, Consider B-scan ultrasound for optic disk drusen

2 If MRI abnormal, consult neurology (MS, Stroke, thrombosis) vs neurosurgery (Mass, Chiari, aneurysm)

3 IF MRI normal, **Lumbar puncture** for Opening Pressure, CSF WBC, RBC, protein, glucose, cytology

- IF CSF analysis abnormal, consult neurology, consider Flow Cytometry, further CSF study
- IF CSF normal, with opening pressure > 25 cm H20, consider Diamox 500 mg BID or TID IF:
    - No known sulfa allergy, known sickle cell disease, known aplastic anemia, pregnancy
    - Consider with caution/warning: history of kidney stones, metabolic derangement, pregnancy (should formally notify, obtain clearance from OB / MFM)

- If severe ICP elevation with severe vision loss or optic neuropathy, consider:
    - Prompt Neuro-Ophthalmology Attending opinion
    - IV solumedrol 1 gram slow infusion (or divided doses of 250 mg Q6 hours)
    - Neurosurgical consult for immediate shunt/evaluation for venous stent
    - Consider Optic Nerve Sheath Fenestration ONSF (with precipitous vision loss)
- If mild/moderate vision loss, no optic neuropathy, D/C for outpatient follow up 2-3 weeks
    - Baseline VA, color vision, IOP, HVF, OCT, exam, Topcon photos as INPATIENT, if able
    - As VF, vision, papilledema improve, on treatment double follow up interval
    - Standard stable follow up Q3 to 6 months, depending on progress
        - Advocate weight loss, diet exercise, LOW SALT/SODIUM DIET
        - Consider Nutritional/Dietary referral for weight management
        - Consider Sleep Study for Sleep Apnea testing

References:

1. **Effect of Acetazolamide on Visual Function in Patients With Idiopathic Intracranial Hypertension and Mild Visual Loss: The Idiopathic Intracranial Hypertension Treatment Trial.** The NORDIC Idiopathic Intracranial Hypertension Study Group Writing Committee. *JAMA.* 2014;311(16):1641-1651.
2. **Papilledema and Obstructive Sleep Apnea.** Purvin VA, Kawasaki A, Yee RD. *Arch Ophth* 2000; 118:1626-30.