GLAUCOMA DIDACTIC LECTURE CURRICULUM

Years	Lecture	Objectives	To Prepare
1 and 2	Glaucoma emergencies *Intro to Glaucoma*	- Differentiate and identify treatment for types of glaucoma in the acute setting: AACG, PDG, PXG, NVG, aqueous misdirection - Delineate pupillary block from non-pupillary block mechanisms - Management of post-op glaucoma surgery patients and potential complications: choroidal hemorrhage, hypotony, over- or under-filtration, blebitis, endophthalmitis	- Iowa Glaucoma chapters 10 "Classification of Glaucoma" and 34 "Principals of Treatment" - BCSC chapter 1
1 and 2	Case-based imaging in glaucoma	- Discuss the significance of various parameters and datum provided by automated static perimetry - Identify anatomic correlation of visual field patterns - Interpret and provide differential for cases when provided with optic nerve appearance, gonioscopy, visual field, and/or RNFL (examples to consider: POAG, NTG, PDG, plateau iris, PCG, NAION optic nerve pit)	- Iowa Glaucoma chapters 5-9 - BCSC chapter 3
1 and 2	Medical management of glaucoma	- Discuss mechanism of action and expected IOP lowering effect of hypotensive medications - Discuss adverse effects and contraindications of drop classes - Review the landmark trials that guide current glaucoma treatment (CIGTS)	- Iowa Glaucoma chapters 36-41 - BCSC chapter 7
1	Angle-closure glaucoma	- Describe the mechanisms of pupillary block and plateau iris - Describe findings of secondary angle closure (neovascular, ICE, tumor, ingrowth, malignant) - Describe complications and management of nanophthalmos	- BCSC chapter 5 - Iowa Glaucoma chapters 17-19, 28, 31-32
2	Open-angle glaucoma	- Differentiate NTG from POAG, and list mimickers of glaucomatous optic neuropathy - Describe secondary OAG presentations (PXF, PDS,	- BCSC chapter 4 - Iowa Glaucoma chapters 14-16 and 20-27

		inflammatory, lens-induced, elevated EVP, traumatic) and management options - Describe the findings of the OHTS, EMGT, and CNTGS trials	
1 and 2	OKAP review	- Review topics pertinent to board exam	
1	Surgical techniques for glaucoma	- Watch the steps of trabeculectomy and review post-operative considerations and complications - Review the techniques for other surgeries: goniotomy, ab externo trabeculotomy, ab interno canaloplasty, an overview of various MIGS procedures	- Iowa Glaucoma chapter 48 - BCSC chapter 8
2	Pediatric glaucoma	- Describe types of pediatric glaucoma: PCG, JOAG, aphakic, Axenfeld-Rieger, Peters anomaly, aniridia, Sturge-Weber - Describe methods of evaluating and treating glaucoma in children	- BCSC chapter 6 - Iowa Glaucoma chapters 11-13 and 46

GLAUCOMA ROTATION ROADMAP

Core Topics (to be discussed on rotation)

- ☐ **POAG vs NTG**: risk factors for each, exam, VF comparison, treatment challenges of NTG
- ☐ **Secondary OAG**: pseudoexfoliation, pigmentary, role of SLT
- ☐ **Pupillary block angle closure**: pathophysiology, risk factors, management
- ☐ **Non-pupillary block angle closure**: aqueous misdirection, plateau iris
- ☐ **Inflammatory glaucomas**: Fuchs, Posner Schlossman, ICE, herpetic
- ☐ **Lens-induced glaucoma**
- ☐ **Congenital glaucoma**: genetics, treatment
- ☐ **Secondary pediatric glaucoma**: aphakia, aniridia, Sturge Weber
- ☐ **Medical management of glaucoma**: mechanisms of action, contraindications, side effects
- ☐ **Glaucoma lasers**: SLT, LPI, and diode: who, how, and when
- ☐ **Glaucoma surgery**: post-op management and common complications of trab/tube

Required Clinical Skills

- ☐ Gonioscopy
- ☐ Optic nerve assessment
- ☐ Visual field and RNFL interpretation
- ☐ SLT
- ☐ LPI

Directed Reading

1. Early Manifest Glaucoma Trial (EMGT)
2. Ocular Hypertension Treatment Study (OHTS)
3. Collaborative Normal Tension Glaucoma Study (CNTGS)
4. Tube Versus Trabeculectomy Study (TVT)
5. Effectiveness of Early Lens Extraction for Primary Angle Closure Glaucoma (EAGLE)
6. Aqueous dynamics- handout from Dr Chaya
7. Gonioscopy.org
   Exam techniques: http://www.gonioscopy.org/cases/basic-exam-techniques/4-mirror-technique.htm
   Atlas of images: http://www.gonioscopy.org/examples.htm
8. Gonioscopic Grading Systems. In: Color Atlas of Gonioscopy.
   https://www.aao.org/disease-review/gonioscopic-grading-systems