Is this glaucoma?

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Optometry’s Meeting 2015 Seattle, WA

Case 1.
54 WM Engineer is referred to UAB Eye Care as a “glaucoma suspect.”
- Mild myopic refractive correction
- Lattice retinal degeneration (OD, OS)
- Former smoker (x 3 yrs)
- Family history of cataract (M & F)

Exam findings
- BSCVA 20/20, 20/20
- IOP 13-16 (OD), 14-15 (OS)
- Pachymetry
  - 587u, 586u
- Gonioscopically open angles
- Lens evaluation (LOCS II): NO 1 / NC2 CS 0 PSC 0 (OD = OS)
- Optic disc evaluation:
  - Small in each eye with inferior rim thinning (narrowing) OD > OS
  - Some PPA consistent with rim configuration
  - Apparently well perfused with distinct margins
  - Appearance consistent with myopic refractive error

- Visual field analysis
  - Reliable in each eye
  - No blind spot on GS
  - PSD not “flagged” in either eye
  - Sporadic depressions OS

- Digital imaging (Cirrus OCT)
  - IT RNFL thinning statistically (OD > OS)
  - Statistically thin GCC temporal OD
Reviewing the data
Good VA
(-) family history of glaucoma
? SAS / (+) heart murmur // no beta-blocker meds.
Normal IOP
Apparently clean VF
Evidence of ONH / RNFL damage

Is this glaucoma? - How do you manage this patient?

Case 2.
69 AAM
ONH appearance changes over several visits suggesting progressive atrophy
VF shows superior attitudinal defect OD with masked nasal step
To treat or not to treat? (in the immortal words of Hamlet)

Case 3.
27 YO Asian male presents for routine refractive care
- Serving a neurology fellowship at UAB Hospital
- Ophthalmic history is remarkable for refractive correction since an early age
- Non-contributory medical and family histories
- BSCVA 20/20 (OD, OS) (-7.50 OD, OS)
- Anterior segment – unremarkable (OD, OS)
- IOP 16, 17 mmHg, (OD, OS); (Pachymetry not obtained)
- ST RNFL defect OD < OS
- Corresponding VF depression OD

Is this glaucoma? - How do you manage this patient?
Case 4.
33 WF Nurse referred for glaucoma evaluation from a community screening.

- Medical history non-contributory
- Family history positive for “glaucoma”
- Ocular history: refractive correction and mention of amblyopia.

Findings
- BSCVA 20/20 OD, OS. Minimal hyperopic refractive correction
- IOP: 16 mm Hg OD and 18 mm Hg OS
- Pachymetry: 567 microns OD and 562 microns OS
- Angles open with visible CB 360 OS, OS
- Anterior segment unremarkable

- ONH evaluation reveals asymmetry (C/D: OS > OD), good margins, no hemes no PPA
- VF reveals Left Inferior quadrantanopsia with emerging nasal step
- Digital imaging (Cirrus OCT)
  - RNFL thinning ST: OD > OS
  - GCC statistically thin in regions corresponding to VF depressions.

Is this glaucoma? - How do you manage this patient?

Case 5.
44 AM has been diagnosed and treated for MS for > 5 years.
BSCVA: 20/40, 20/40+
ONH reveals temporal pallor
Digital imaging reveals statistically significant GCC thinning

Is this glaucoma? - How do you manage this patient?
Case 6.
28 WM contact-lens wearer referred for second opinion on ONH appearance OS.

- Non-contributory medical and family histories
- BSCVA 20/20 in each eye
- IOP: 16, 16
- Gonioscopically open angles
- Pachymetry 528u, 530u
- ONH appearance unremarkable OD but shows apparent cupping OS

Visual Field results are reliable in each eye and show sporadic depressions OD and paracentral depressions OS.

Digital Imaging (Cirrus OCT) shows optic nerve profile.

Is this glaucoma? - How do you manage this patient?

Case 7.
65 YO WM referred for glaucoma evaluation.

- Healthy pt with vision complaints
- Noncontributory personal medical and family histories (ex., father with HTn)
- No medications, no chronic diseases
- VA 20/25+ // 20/30 BAT: 20/50 // 20/40
  - Superpinhole 20/20 // 20/20
- IOP 17/15
- Pachymetry 601/606
- Keratometry: 42.00 / 42.00
- Refractive correction:
- OD -1.25 -0.25 X 050, OS -1.00 -0.75 X 130
- BSCVA = 20/25+ // 20/30

ONH appearance is suspicious but photographs suffer resolution secondary to media opacity.
Visual field is reliable and clean in each eye.

Digital imaging (Cirrus OCT) shows statistically thin RNFL ST and IT in each eye.

Is this glaucoma? - How do you manage this patient?

Case 8.
52 WM presents for follow-up care following diagnosis and treatment by community ophthalmic practitioner.

- Non-contributory medical history
- Currently treated with 3 topical drops in each eye; IOP mid-teens over several visits.
- BSCVA 20/20 OD (-5.25); 5/350 (-9.50) OS
- VF is reliable and clean OD, no VF possible OS

- ONH appearance is suspicious OS

- Digital Imaging (Cirrus OCT) normal

- Followed X several years and continued on medications, with modification to only
  PGA in each eye. IOP maintained in mid-teens.

- A decision was made to offer a “vacation from medication.”

- IOP stable X 2 and 4 weeks but elevated OS> OD at week 6!

- Gonioscopy reveals angle abnormalities . . . .