

Case notes

Primary open angle glaucoma

Patient details

Initials: BM

Age: 61 years

Gender: Male

Reason for visit: Occasional difficulties with NV RE>LE

Refraction: RE: +1.00/-0.50x85
LE: +1.25/-0.75x100

Distance Acuity: RE: 6/5⁺⁴, LE 6/4

Reading add: RE & LE: +2.25D

Near acuity: RE: N5, LE: N5

General health: Good; BP well controlled

Medication: Ramipril

Ocular history: Nil

Headaches: Nil

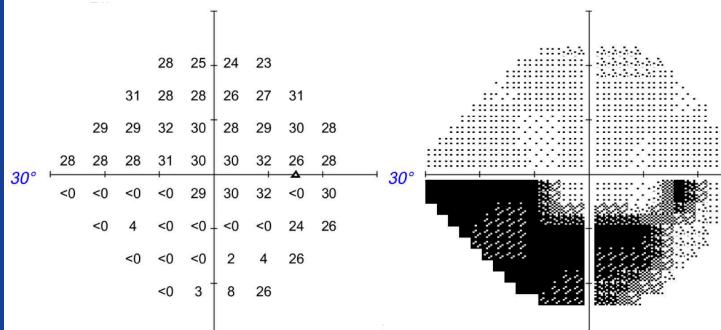
Family history: Father had poor vision in later life, ?glaucoma

Examination

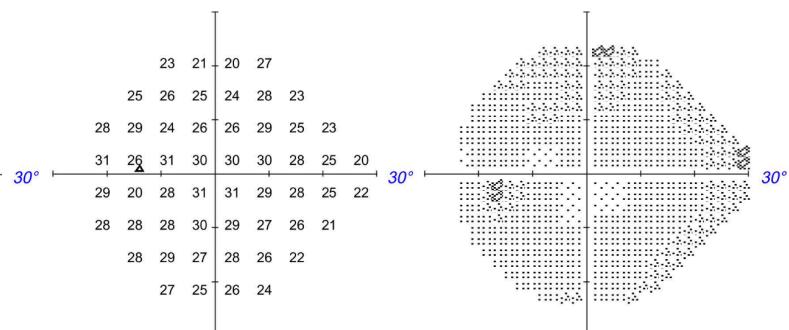
Slit lamp & undilated Volk Superfield

Right eye	Structure	Left eye
Clean	Lids & lashes	Clean
Clear	Cornea	Clear
Grade 3	van Herick	Grade 3
Clear	Lens	Clear
C:D 0.90	Disc	C:D 0.85
Thin superior rim		
1.2mm	Disc height with Volk lens	1.2mm
PPA	Disc margin	PPA
No holes/ tears/detachment	Periphery	No holes/ tears/detachment
Right eye	Pulsair	Left eye
21mmHg	@14:30	22mmHg
(mean of 4 readings)		
480µm	Central corneal thickness	490µm
22mmHg	Goldmann	23mmHg

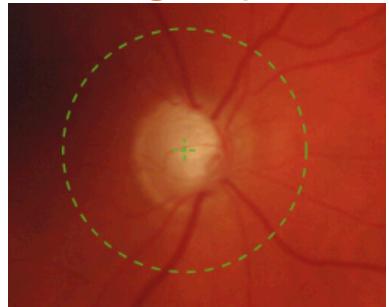
Right eye



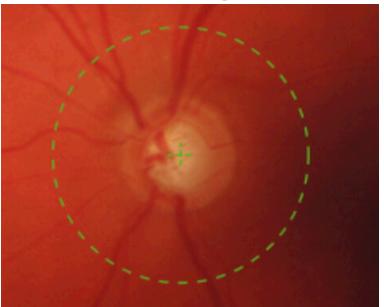
Left eye



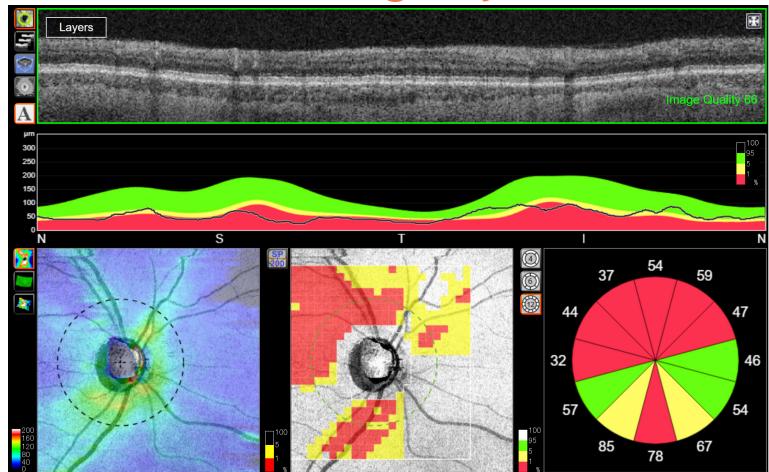
Right eye



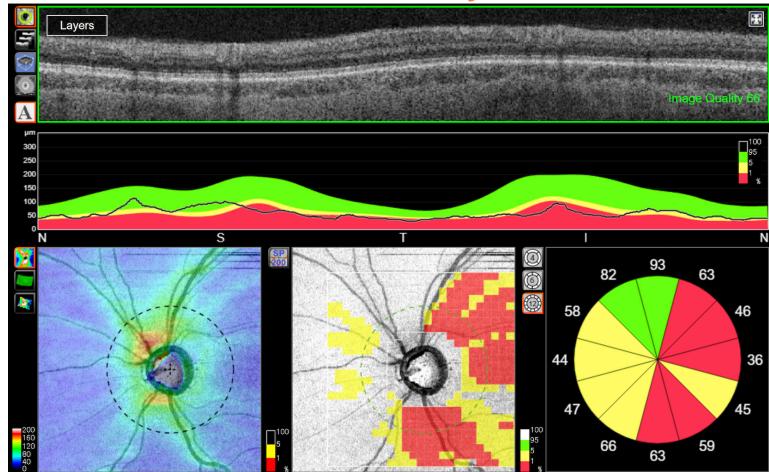
Left eye



OCT right eye



OCT left eye



College of Optometrists' Guidance¹ examining patients at risk from glaucoma

You should select additional procedures to those in the routine eye examination, according to the patient's clinical need. You should normally:

1. assess the optic nerve head. This would include assessing the size of the disc
2. measure the IOP.

It is good practice to follow up equivocal results from non-contact tonometry with contact applanation tonometry

Clinical summary

Both optic discs have glaucomatous features. The right disc has barely any superior rim remaining. Both show nasalisation of the central vessel trunk, bayonetting of vessels, increased visibility of the laminar pores and peri-papillary atrophy.

The optic discs heights are both 1.8mm (using a magnification factor of 1.5X for a Volk Superfield lens ie $1.2 \times 1.5 = 1.8$). A C:D ratio of 0.9 is likely to be abnormal in a disc of this height.²

BM's corneas are 60-70μm thinner than average, so his true IOPs are likely around 4mmHg higher than the Goldmann results.

The visual field in the right eye shows an extensive inferior arcuate defect, consistent with significant loss of the superior neuro-retinal rim; many points are profoundly damaged. There is some reduction in sensitivity in the left eye, but the field remains reasonably intact.

OCT shows significant thinning of the retinal nerve fibre layer in both eyes, with flattening of the typical profile.

After his sight test, BM was examined within a referral refinement scheme. He was then assessed by a consultant ophthalmologist who prescribed latanoprost eye drops RE & LE to be used each night. He was also added to the waiting list for selective laser trabeculoplasty to both eyes.

Guidance

Ensure that you are familiar with the relevant guidance (NICE or SIGN) for detection and referral of glaucoma patients in your area.^{3,4}

1: College of Optometrists (2021). <https://www.college-optometrists.org/clinical-guidance/guidance/knowledge-skills-and-performance/examining-patients-at-risk-from-glaucoma>

2: Garway-Heath *et al.* <https://pubmed.ncbi.nlm.nih.gov/9924296/>

3: NICE Guidance NG81 (2022). <https://www.nice.org.uk/guidance/ng81>

4: SIGN 144 (2015). <https://www.sign.ac.uk/assets/sign144.pdf>