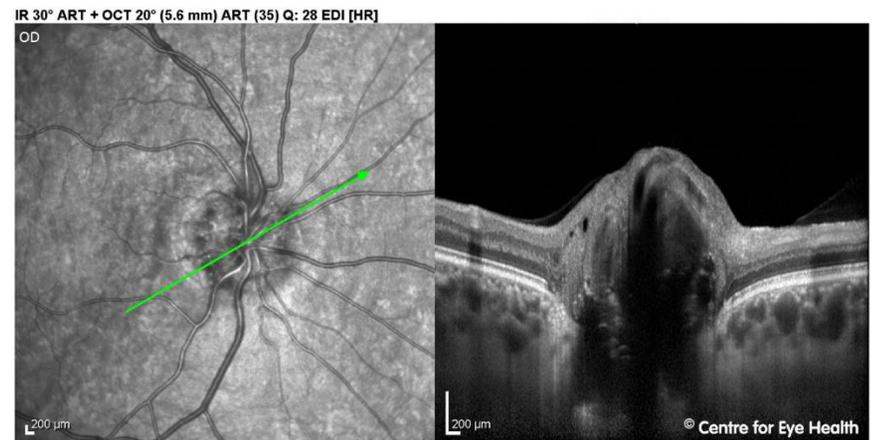
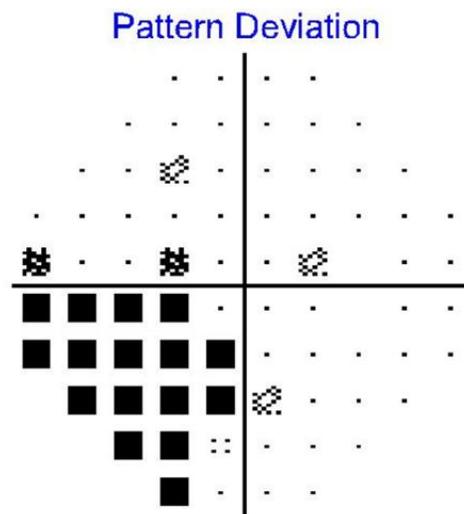


## CFEH Facebook Case #43

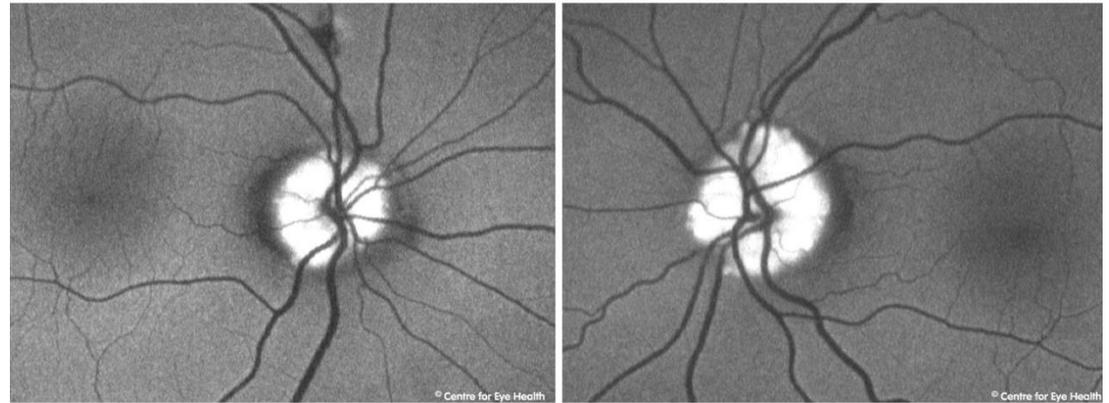
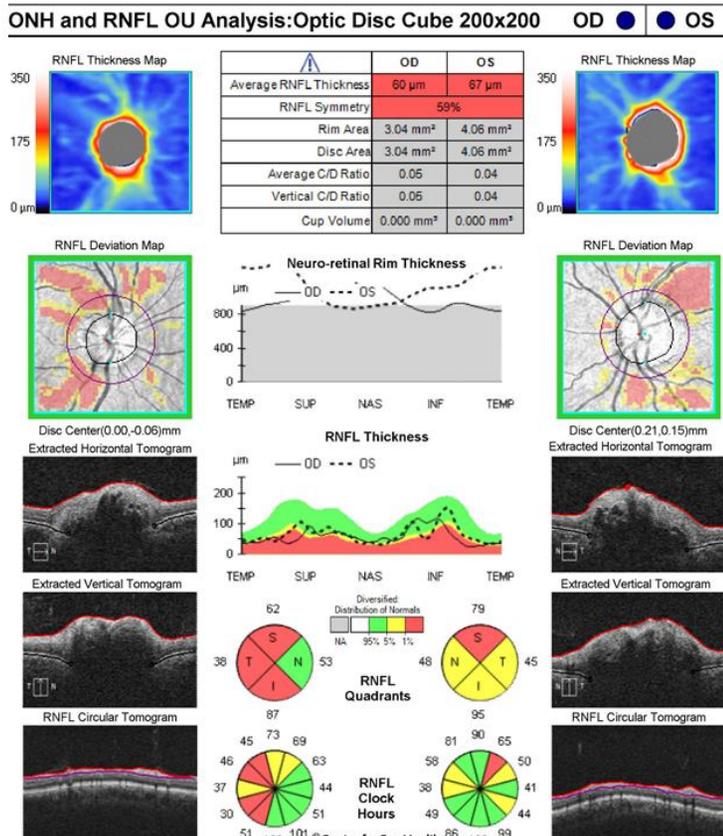
A 45 year old Caucasian male was referred to CFEH for examination of his optic nerves. He smokes but is otherwise healthy. VA was 6/6 in each eye and applanation tonometry revealed an IOP of 15mmHg in each eye. A red cap test was failed with red appearing brighter through the left eye and darker through the right. Right and left eyes had a similar appearance so only the right is shown here. What are the possible causes of this field defect and what further imaging might help to confirm a diagnosis?



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# ANSWER

Differentials based on the information given include small crowded discs, buried disc drusen, optic neuritis, optic atrophy and anterior ischaemic optic neuropathy. Further imaging showed the following:



In this patient, the OCT line scans show an elevation of both optic nerves, however the Cirrus OCT also shows a thinning of the retinal nerve fibre layer in most quadrants as opposed to a thickening as you see in true papilloedema. The fundus autofluorescence shows hyper-reflective "lumps" on the optic nerve head (easier to see on the left eye which has been included here for illustrative purposes). This is a finding characteristic of optic nerve head drusen.

Optic nerve drusen occur in approximately 1-2% of the general population, and are usually bilateral (86% of cases). The drusen are typically calcified deposits within the optic nerve head and may be buried or obscured beneath the disc surface (such as in this case), causing pseudopapilloedema.

Drusen may enlarge slowly over time and visual field defects are often progressive but they rarely affect functional vision. This patient however was referred to a neuro-ophthalmologist, due to the extent of the field defect at this time. Although no definitive treatment has been identified, IOP reduction may sometimes be used to try and slow the progression of field loss.