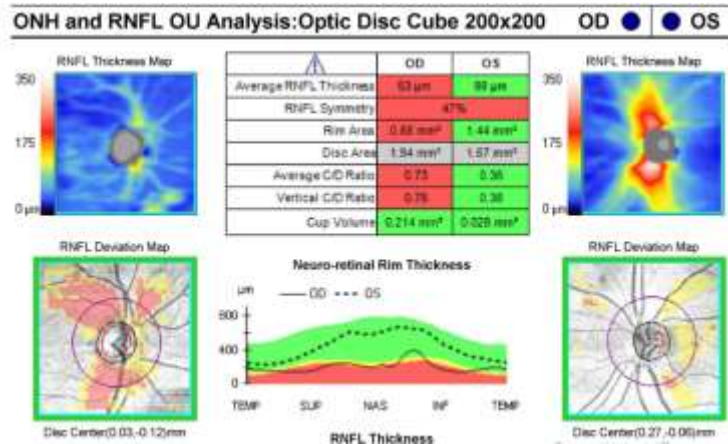
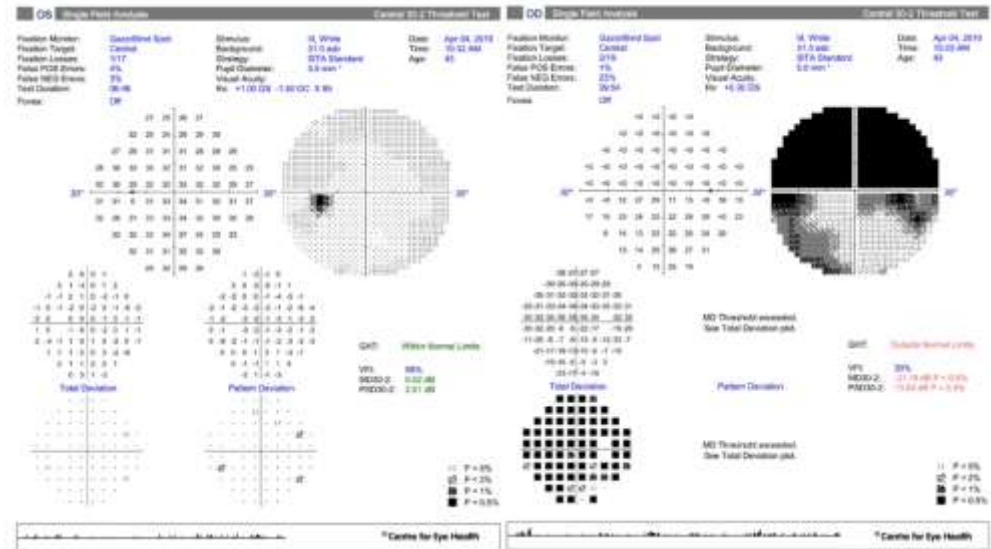
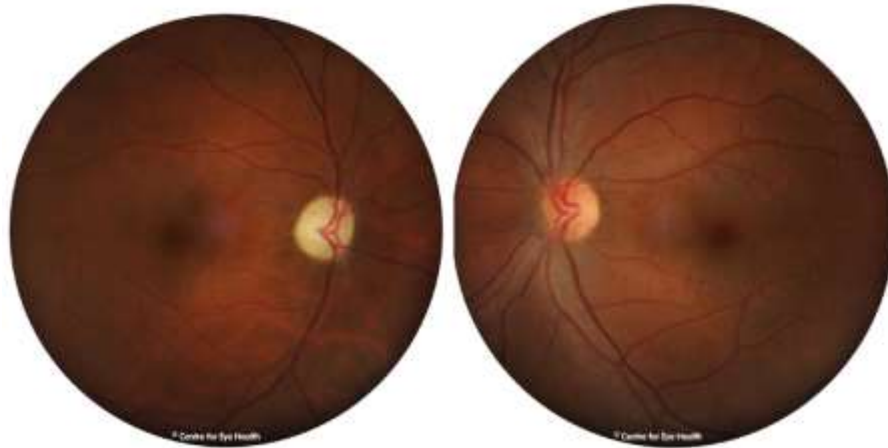


CFEH Facebook Case #141

A 40 year old male was referred to the Centre for an optic nerve assessment. He reports a traumatic injury 6 years ago where a metal spoke gouged his lower right lid but did not penetrate the eye. His vision subsequently reduced significantly for 4 weeks, then gradually improved but did not completely return to normal. An MRI showed no damage to the optic nerve at that time but the patient was unsure of the reason for the vision loss. Imaging results are below. What is the likely cause of the visual field defect in this patient?



Answer

Retinal photos show a very pale, cupped nerve in the right eye and minimal RNFL reflectivity – findings that indicate right optic atrophy. It is likely that this is the result of the trauma sustained 6 years ago. While the metal object did not penetrate the globe, the damage to the lower lid and the patient’s description of the accident indicate that the metal spoke could have travelled between the globe and the orbital wall causing a forceful rotation of the globe.

This type of force can result in optic nerve avulsion whereby there is a traumatic disinsertion of the nerve fibres at the disc margin (the disc sheath remains undamaged) leading to a rare form of traumatic optic neuropathy. In the acute phase, other clinical signs associated with this condition may include peripapillary subretinal or vitreous haemorrhage and choroidal folds due to peripapillary retinal oedema.

While it is not expected that the structural damage or visual field defect will be progressive, a review was scheduled for 6 months to ascertain this.