

# Optic disc swelling associated with retained metallic intraocular foreign body (IOFB).

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**Case:** A man felt an object hit his right eye whilst watching a friend chiselling a suspension unit of a car. The eye was red for one week, then spontaneously resolved. Approximately six months after the initial injury vision started to deteriorate which prompted an ophthalmic review. At Vitreoretinal review right eye visual acuity was 6/19 unaided and a dark foreign body fragment with some retinal atrophy in the infratemporal peripheral retina was detected. The retina was attached, but optic disc swelling was noted. No other ocular inflammation or signs of ocular siderosis were seen.

**Impression:** A toxic reaction from the IOFB was thought to account for the optic disc swelling causing visual deterioration, so removal was advised.



Figure B: Post op Optos

**Surgery:** Vitrectomy, removal of IOFB with intraocular magnet, endolaser (360 degrees and encircling posterior margin of impactation site) and C3F8.

**Energy Dispersive X-Ray Spectroscopy analysis:** showed elemental peaks for Iron, Phosphorus, Oxygen and Sodium. The ratio of peaks suggested that the fragment may have originated from a phosphate protective coating or paint applied to steel or another ferritic surface.

**Outcome:** Vision improved to 6/5 four months post op and optic nerve swelling slowly improved, neuro-ophthalmology opinion was sought in the interim. Literature search: revealed one previous report of a retained IOFB associated with optic disc swelling as part of an ocular siderosis case series. That case had classic clinical features of ocular siderosis alongside the optic disc swelling.

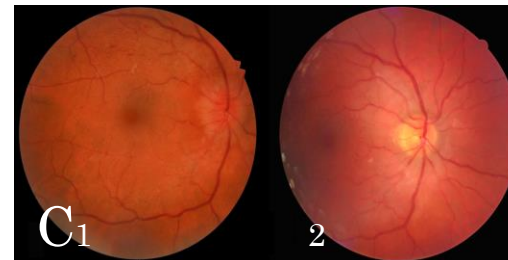


Figure C: Kowa retina images of right optic nerve, comparing at four months after presentation (1) and final visit (2), where swelling had resolved.

**Conclusions:** If there is a history of potential trauma and optic disc swelling is seen, a thorough examination must be undertaken to rule out an IOFB. As our case shows, there can be little other signs to its presence.

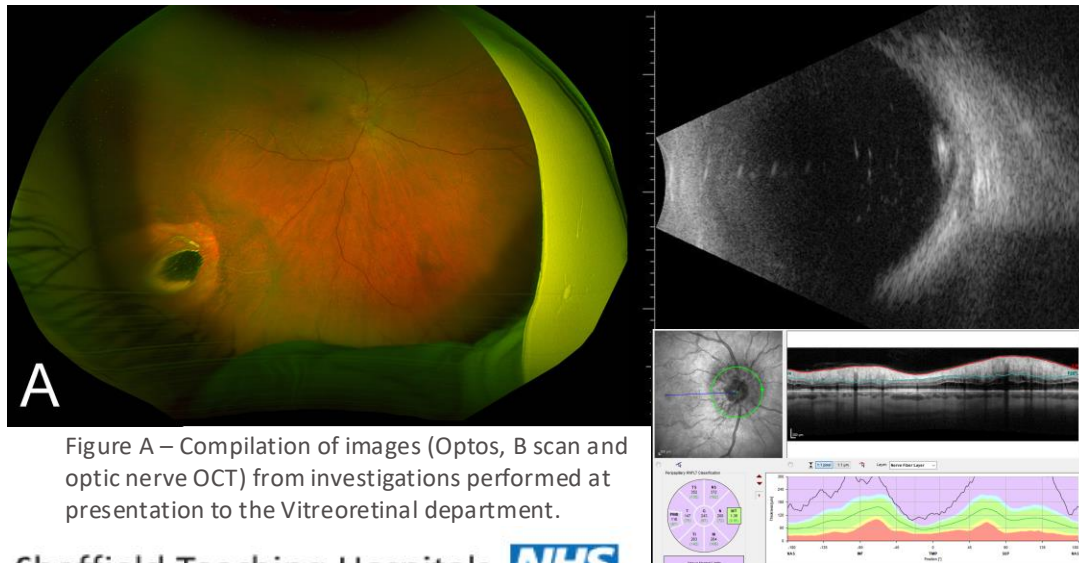


Figure A – Compilation of images (Optos, B scan and optic nerve OCT) from investigations performed at presentation to the Vitreoretinal department.