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EXTERNAL REMOVAL OF PERFORATING FOREIGN BODIES AIDED BY LOW INTRAOCULAR PRESSURE DURING VITREORETINAL SURGERY

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A male in mid-twenties presented with a complaint of sudden painful diminution of vision in right eye after being involved in an industrial blast injury 10 days back. Primary surgical repair of scleral perforation had been done at a peripheral hospital. On examination, his visual acuity was perception of light with inaccurate projection of rays in all quadrants and intraocular pressure (IOP) was 6 mmHg. Fundus examination revealed 360 degree giant retinal tear (GRT), retinal detachment with a closed funnel configuration, shallow choroidal detachment in all quadrants and crystalline lens drop in the vitreous cavity. Non-contrast computerized tomography (NCCT) revealed the presence of a foreign body measuring- 4 mm x 3.8 mm x 8 mm located just nasal to the optic nerve insertion, abutting the posterior-medial coat of the globe.

Patient was taken up for vitreoretinal (VR) surgery. Three standard 25 gauge pars plana ports were made at 3 mm from limbus. After completing core vitrectomy, a localized inferonasal peritomy with posterior tenotomy was done and medial and inferior rectus muscle were bridled. Infusion pressure was then reduced to 10 mm Hg. The conjunctiva and tenon's were retracted with the help of Desmarres retractor, globe was pressed with a forceps and the tenon's dissection was progressed posteriorly with the help of a scissors till the foreign body was visible. The fibrotic capsule around the foreign body was incised with a micro vitreoretinal (MVR) blade and the foreign body was held and then explanted with the help of serrated forceps. The infusion pressure was raised to 25 mm Hg and VR surgery was completed. This included lensectomy, removal of subretinal membranes and opening the retina with the help of perfluorocarbon liquid (PFCL). The incarcerated retina was released by a retinectomy around the fibrotic granuloma nasal to disc (corresponding to exit wound) and a thorough peripheral vitrectomy was done. A 360 degree endolaser and PFCL-silicon oil exchange was done.

Over 6 months follow up patient has maintained best corrected visual acuity of 20/200.

NCCT for precise localization of foreign bodies is essential to plan the appropriate approach of perforating foreign body removal. Keeping low IOP allows easy compression of the globe with minimal indentation and allows a more posterior external access to remove retrorbital perforating foreign bodies.