



Figure S1. Bullous retinal detachment due to systemic hypertension. Figures S1A and S1B demonstrate frequently observed chromatic pupil light reflex deficits with poor or absent pupil constriction after red light illumination (630 nm, 200 kcd/m²) and near normal or normal constriction after blue light illumination (480 nm, 630 kcd/m²). Figure 1C is from the same patient with bilateral bullous retinal detachment due to systemic hypertension. Retinal blood vessels and focal hemorrhages are visible through dilated pupils.

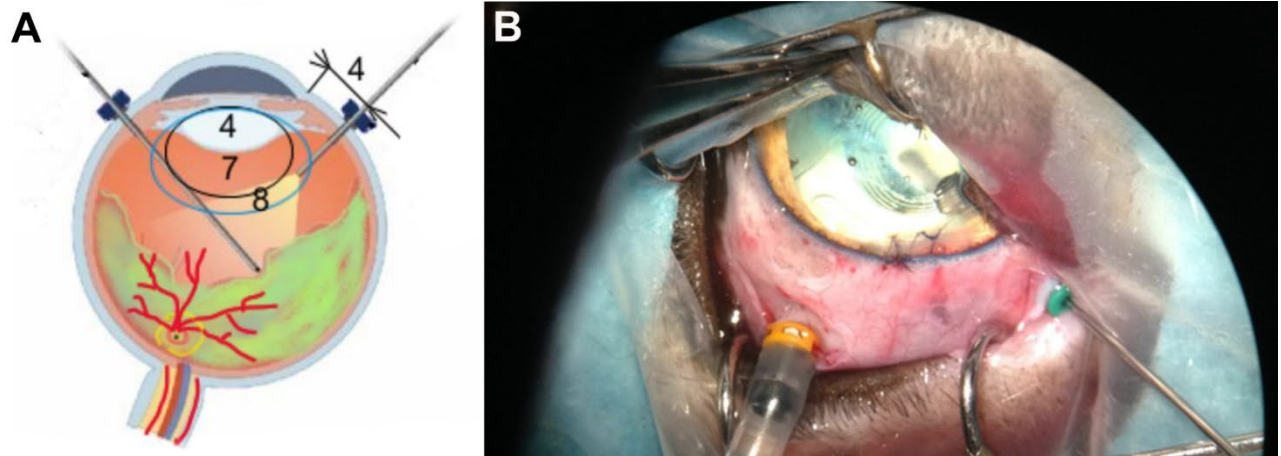


Figure S2. Pars plana vitrectomy (PPV) technique in feline eye. Figure S2A is a schematic presentation of the PPV surgical approach with differences in the average lens thickness for various species (4 mm human, 6-7 mm canine, 8 mm feline). Due to large feline lens size, standard 4-5 mm trocar port placement still results in contact between the lens and surgical instruments. Figure S2B is image from the PPV from Patient 4.

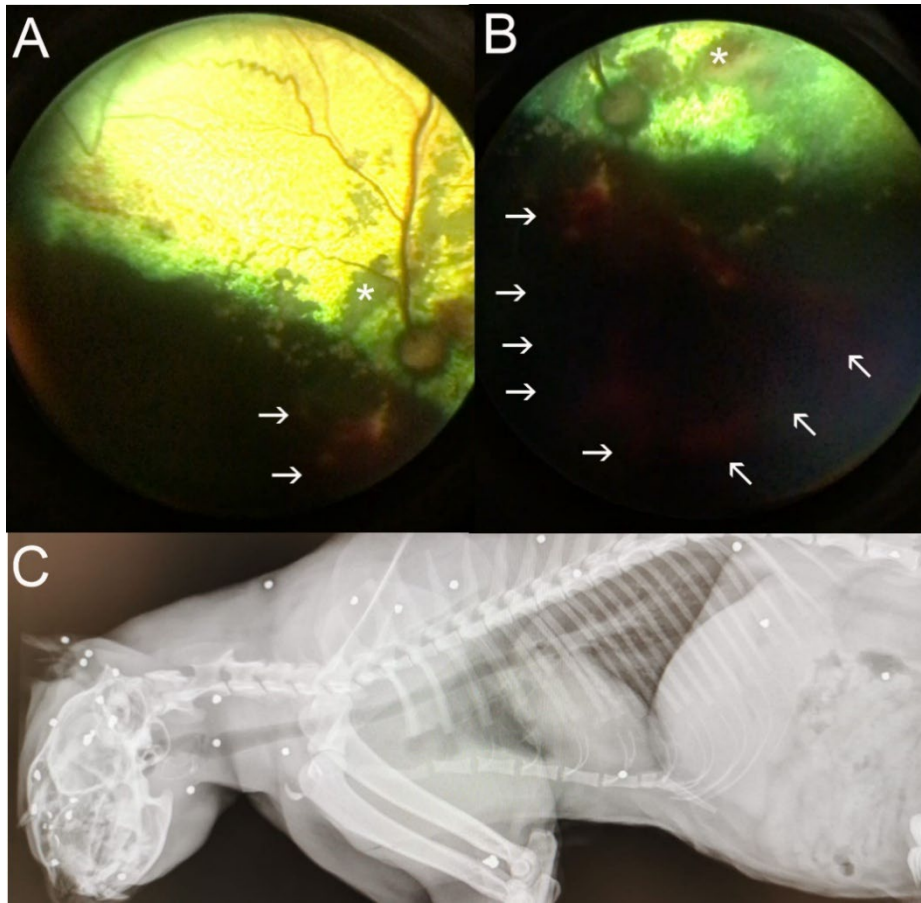


Figure S3. Giant inferior retinal tear due to gunshot injury. Figures S3A and S3B are fundus images from a patient with gunshot injury. The star symbol points to the inflammatory subretinal exudate (grey zones of subretinal fluid accumulation), whereas white arrows delineate large retinal tear with some retinal and vitreal hemorrhage. Figure S3C is a radiograph from the same patient showing numerous gun pellets embedded in various tissues, with heavy concentration in the head region. The eye was visual upon initial presentation, and remained visual during the clinical follow up.

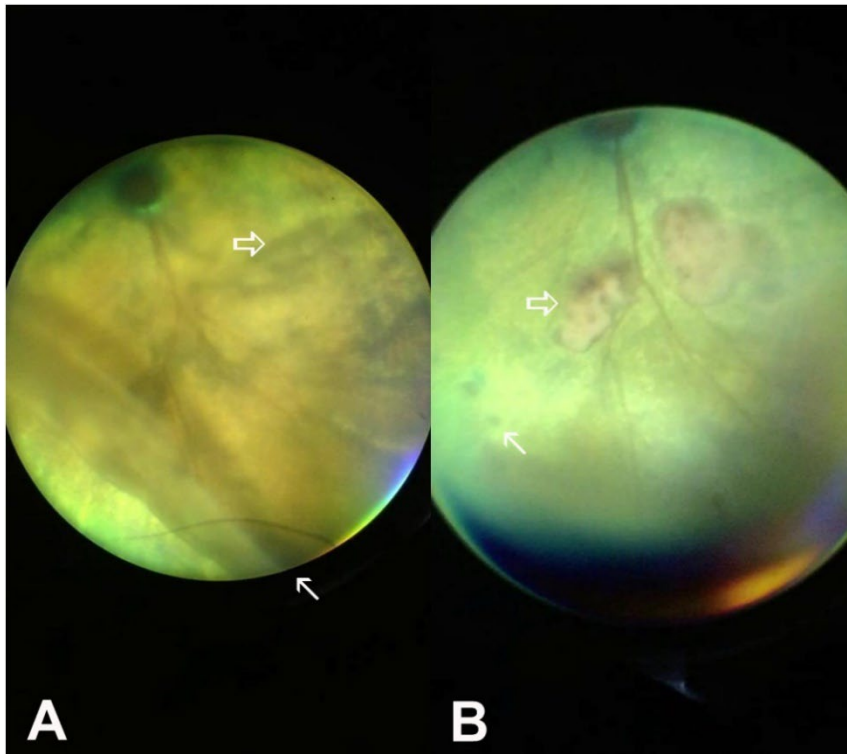


Figure S4. Preoperative and immediate postoperative appearance of Case no 4. Figure S4A is a fundus photos from the preoperative appearance showing superonasal GRT (full arrow) and grey zones of subretinal fluid accumulation (open arrow). Figure S4B is an immediate postoperative fundus appearance showing flat position of the retina under silicone tamponade. The open arrow points to the triamcinolone deposit used for better vitreal visualization during PPV on the retinal surface, and closed arrow points to the appearance of laser retinopexy spots, which are barely visible.

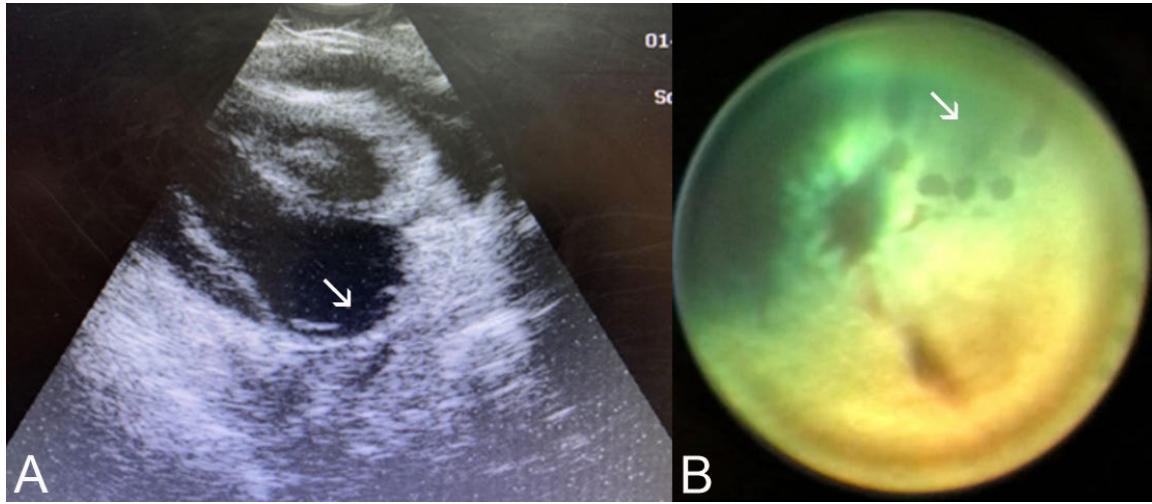


Figure S5. Preoperative and postoperative appearance of Case no 7. Figure S5A is an image of preoperative ocular ultrasound, which revealed presence of the retinal detachment and retinal hole (white arrow). Figure S5B is postoperative fundus appearance showing flat position of the retina under silicone tamponade. The arrow points to the retinal hole region which is delineated with a single row of laser retinopexy spots which are dark and much more prominent in this case.

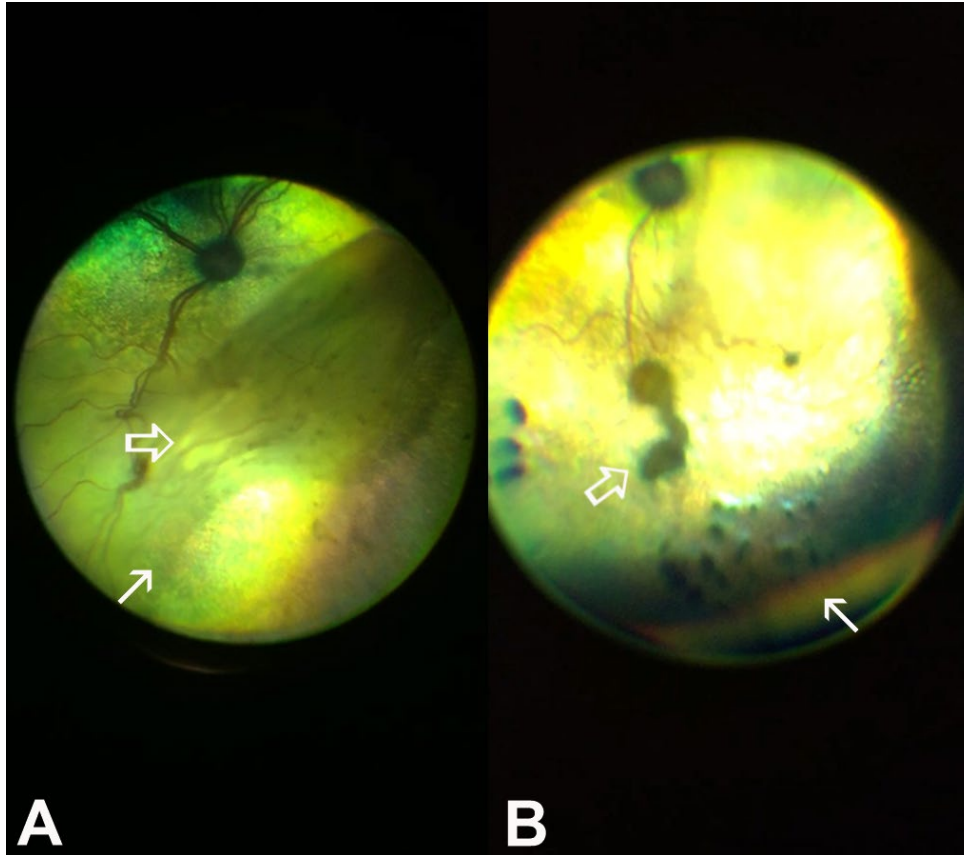


Figure S6. Preoperative and immediate postoperative appearance of Case no 8. Figure S6A is a fundus photos from the preoperative appearance showing superotemporal GRT (full arrow) and multiple focal retinal holes with a very fragile retinal appearance (open arrow). Figure S6B is a postoperative fundus appearance showing flat position of the retina under silicone tamponade. The open arrow points to the perivascular barrier pexy to prevent extension of retinal holes to the major blood vessels and possible major intraretinal bleeding, whereas closed arrow points to the grid appearance of laser retinopexy spots, which were positioned over thin retinal regions of retinal holes with a goal of preventing new retinal tear formation.