

BEACON (BEAVRS case collection initiative) study outline form

Full Title: Scleral Rupture during Cryo-retinopexy

Acronym: SCARCE study

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What you are studying: Scleral rupture during cryo-retinopexy application for the treatment of retinal tear.

What is your primary research question: What is the final visual outcome and prognosis after the surgical repair for cryo-related scleral rupture?

Background and importance: Scleral rupture during cryo-retinopexy for retinal tears requires urgent surgical repair. Although this is known as a rare complication, there seems to be very little literature discussing its frequency and outcomes, and we believe this complication may be under-reported. We aim to collate cases from UK eye units that have previously managed and treated similar patients. We would like to highlight this clinical entity and inform vitreoretinal surgeons about possible risk factors, treatment, and prognosis. We hope this information will de-stigmatize a difficult complication and allow us to inform our patients better in the future.

Case definition: Scleral rupture during cryo-retinopexy is defined as full-thickness dehiscence of the sclera caused by cryoprobe penetration that requires urgent surgical repair.

Inclusion criteria:

- Cryo retinopexy application for symptomatic retinal tear/tears
- Age: Over 18 years old
- Surgical repair was applied within 3 days after the scleral rupture.

Exclusion criteria:

- Scleral rupture appeared intraoperatively (e.g., during Pars plana vitrectomy, Scleral buckle, Strabismus, or Glaucoma surgery)
- No surgical intervention was applied after the scleral rupture

Likely incidence: This is a rare complication, but we hypothesize it is under-reported. To the best of our knowledge, there are no reports in the literature. However, we experienced this complication once in our VR department and are aware of at least 4-5 cases across the UK and Germany.

Prospective/Retrospective data collection?: Retrospective data collection.

Eligible study period: September 2003 – September 2023

Target completion for end of data collection: 31st of March 2024

Primary outcome measure:

- Best Corrected Visual Acuity (BCVA) at the final follow-up visit
- Macular status as defined by Optical Coherence Tomography (OCT)

Secondary Outcome measures:

- Complications associated with the surgical repair of the scleral rupture
- Clinical features predisposing to this complication

Pre-planned analysis outline: The descriptive parameters of the cases will be presented. Statistical analysis of the patients' characteristics and the primary outcome measures will be conducted if there are sufficient cases.

Images required: Fundus Images, Ultrasound b-scans, and macular OCT scans.

Data collection form(s): An Excel spreadsheet with all required data will be emailed. The data must be anonymized and not include details that may lead to an individual being identified.