

Considerations in Immediate Bilateral Sequential Retinal Detachment Surgery

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Introduction

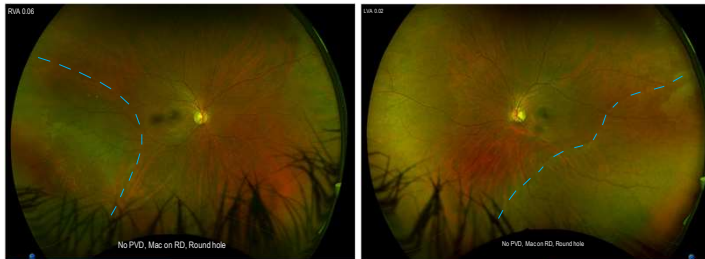
- Bilateral simultaneous retinal detachments are relatively rare, having been reported to be present in 1.5-2.3% of RD registry studies
- Management of simultaneous detachments must take into consideration the nature of the detachment, patient factors, and service factors such as access to an operating theatre.
- Immediate sequential surgery is not commonly performed but can be indicated in select cases.

Methods

- Retrospective case series of patients who underwent immediate sequential RD surgery, in a large tertiary referral centre in the UK
- Widefield images and data pertaining to clinical presentation of each case was collected (Visual Acuity presented in LogMAR).
- The rationale for performing immediate sequential surgery is discussed in each case.

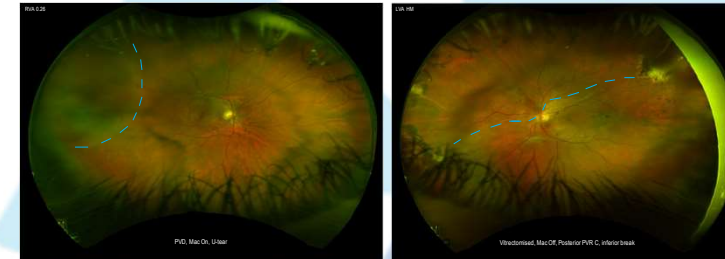
Case Series

CASE 1 – 23yo female



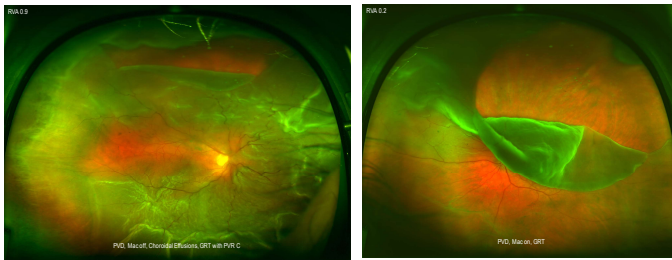
PC: gradual blurring of vision for 12 months. No flashes or floaters. No trauma
POH: CL user (-8D myopia)
Treatment: Immediate bilateral sequential scleral buckles under GA.
Rationale: Due to macular status and availability of anaesthetist.
Outcome: LE buckle required revision due to unsupported hole inferiorly noted 4 weeks later, but retina fully attached following this.

CASE 2 – 28yo female, background of eczema, pregnant (27/40) at presentation



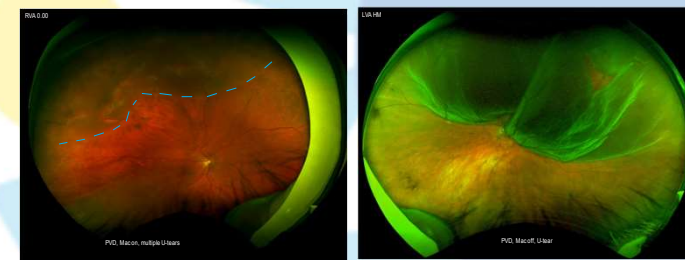
PC: LVA reduced 3d. RE asymptomatic.
POH: Bilateral pseudophakia, previous LE PPV Laser Gas for Mac On RD 3y ago
Treatment: RE PPV/360 Laser/SF₆ then immediate LE PPV/360 Laser/ Retinotomy/ 1k Oil under GA. Face down for 24h.
Rationale: Due to macula on status of RE, patient pregnancy status, minimising further GA, and availability of obstetric anaesthetist
Outcome: RE required two further PPVs at month 4 and month 6 due to new U-tears within laser. LE Oil remains in situ.

CASE 3 – 56yo male



PC: RE reduced vision 3wk, LE shadow 1wk
POH: FH Glaucoma
Treatment: RE PPV/PVR Peel/360 Laser/1k Oil then immediate LE PPV/360 Laser/C₂F₆ under GA. Posture face down 24h.
Rationale: Due to macular status and availability of anaesthetist.
Outcome: RE redetached due to PVR and Oil underfill, required retinectomy and further Silicon Oil. Retina attached after oil removal with final RVA 0.4 after Oil removal.

CASE 4 – 52yo male



PC: LE floaters 1w, and shadow in vision for 4d. RE Asymptomatic.
POH: LASIK 20y ago
Treatment: RE PPV/Laser/SF₆ then immediate LE PPV/Laser/C₂F₆ under LA. Face down 3 days and nights then alt cheek to pillow for 7 nights.
Rationale: Patient choice (with full understanding of gas bubbles and posturing).
Outcome: Both retinas fully attached, patient discharged at 3 months (LVA 0.28).

Discussion

- Apart from the established considerations in immediate sequential ocular surgery, several additional factors must be considered when planning for immediate sequential RD surgery.
- The detachments: macular status, lens status, PVD vs No PVD, chronicity/PVR, choice of tamponade and posturing. Individualised patient counselling regarding the post-operative recovery period is essential.
- The patient: medical history, level of anxiety and suitability for general anaesthetic.
- The service: access to theatre and availability of anaesthetist in an acute setting.
- Different treatment modalities exist which can help reduce the operative burden on the patient (e.g. barrier laser, pneumatic retinopathy, vitrectomy, buckle).

Discussion

Additional factors must be considered when planning for immediate sequential RD surgery. RDs vary greatly in their presentations, but with careful patient selection and individualised counselling, this approach can be performed safely. Without complications, immediate sequential surgery may afford faster visual rehabilitation.

Discussion

1. Krohn J, Seland JH. Simultaneous, bilateral rhegmatogenous retinal detachment. *Acta Ophthalmol Scand*. 2000 Jun;78(3):354-8. doi: 10.1034/j.1600-0420.2000.078003354.x. PMID: 10893072.
2. El Matri L, Mghaieth F, Chaker N, Kamoun M, Charfi O, Chaabouni A. Les décollements de rétine rhéguogénés bilatéraux simultanés. A propos de 7 observations [Simultaneous bilateral rhegmatogenous retinal detachment. 7 case studies]. *J Fr Ophtalmol*. 2004 Jan;27(1):15-8. French. doi: 10.1016/s0181-5512(04)96086-x. PMID: 14968072.
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