

Results: There occurred different types of hole closure, such as U, V and W. A statistically significant improvement of the mean CDVA ($p < 0.05$) was observed in the whole group. No statistically significant differences were found in IOP pre- and postoperatively ($p > 0.05$).

Conclusions: Posterior 25G vitrectomy with inverted ILM flap and SF6 gas endotamponade performed in the case of macular holes improves visual acuity. Profile of the observed complications shows that vision-threatening consequences involve a small group of patients.

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Complex Retinal Detachment Repair: Outcomes of Silicone Oil Tamponade in Cork University Hospital 2010–2014

Terence Mc Swiney, Niamh Collins, Anthony Cullinane

Cork University Hospital, Cork, Ireland

Introduction: Complex retinal detachment repair remains a challenging area in vitreoretinal surgery. The use of silicone oil (S.O.) can improve the prognosis of complex retinal detachment, however is associated with complications, hence removal of S.O. is generally recommended. We evaluated the outcomes of complex retinal detachment repair with S.O. tamponade, in terms of anatomical success, visual acuity and complications.

Methods or Study Design: Retrospective review of all cases of silicone oil tamponade for retinal detachment repair in Cork University Hospital over 4 years (2010 – 2014) operated by one surgeon. We analysed 23 consecutive cases of S.O. tamponade (21 patients – 1 bilateral). One thousand centristroke silicone oil tamponade was used in each case. Three patients had previous retinal detachment repair with SF6 gas tamponade. Fifteen eyes underwent silicone oil removal. Median duration of S.O. tamponade among these 15 cases was 5.5 months; median duration of follow-up after S.O. removal was 11.5 months.

Results: Anatomical success after S.O. insertion was achieved in 22 of 23 cases (20 patients). Of these, S.O. was removed in 15 cases and was left in situ in 7 cases. Two eyes redetached under S.O. tamponade within 2 months of the initial S.O. insertion and had a second procedure with S.O. tamponade. At last follow-up, 14 cases remained attached following S.O. removal, 1 eye re-detached within 6 months of S.O. removal, 7 eyes remained attached under S.O. tamponade (including the two early redetachments). Visual acuity improved or remained stable post removal of S.O. in all 10 cases (median visual acuity 6/36). Complications included uncontrolled IOP in 3 eyes – one required trabeculectomy.

Conclusions: While reattachment and complication rates are similar to other studies, the majority of patients in this small series with complex retinal detachments achieved relatively good visual outcomes. The rate of redetachment following S.O. tamponade was low.

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Keywords: Retinal Detachment, Silicone Oil, Outcome.

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Indications and Outcomes for Sclera Tunnel Fixed Secondary Intra-Ocular Lenses: Single Centre Series

Fatemeh Shams, Zachariah Koshy

University Hospital, Ayr, United Kingdom

Introduction: Insertion of sclera fixated posterior chamber intraocular lenses (PCIOL) allows lens implantation in the absence of adequate lens capsule support. We evaluate our experience with a 3 piece IOL fixed through scleral tunnels.

Methods or Study Design: Scleral fixed PCIOLs performed at University Hospital, Ayr, Scotland. A single surgeon series in a teaching hospital.

Methods: Retrospective review of case notes of 18 eyes over a 2-year period (January 2013–April 2015).

Results: Indications for secondary IOL insertion: 2 subluxed crystalline lenses from Marfans syndrome, 4 aphakia secondary to trauma both perforating and blunt, 1 dislocated crystalline lens, 4 aphakia secondary to complicated phacoemulsification surgery, 7 subluxed lens capsular bag complex.

38% of eyes had improved best-corrected visual acuity (BCVA) postoperatively, 27% remained the same and 22% worsened.

3 cases were found to have a mild postoperative PCIOL tilt, which had no visual implications. 2 developed postoperative retinal detachments (RD), which were subsequently fixed. 1 developed a suprachoroidal haemorrhage following post-operative trauma. 1 developed postoperative cystoid macula oedema that resolved with medical management. 1 developed a dislocation of the IOL.

Conclusions: Our experience shows that insertion of scleral fixated PCIOLs is a viable method of secondary IOL insertion in multiple scenarios where lens capsular support is lacking. It is recommended that it be done with vitreoretinal back up due to potential complications.

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Keywords: Intraocular Lens, Fixed, Sclera, Secondary.

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Temporary Silicone Encircling Band in Retinal Detachment Scleral Surgery

Romualdo Malagola, Luigi Pattavina, Carmela Carnevale, Loredana Arrico

University Sapienza Department of Ophthalmology, Rome, Italy

Introduction: Two main purpose of this study were to assess the validity of a silicone band that is closed with absorbable thread instead of traditionally not-absorbable one and to estimate the changes in refraction and axial length after this surgery.

Methods or Study Design: 8 patients (8 eyes) with rhegmatogenous retinal detachment were enrolled. All patients underwent a comprehensive ophthalmologic examination including high contrast Snellen visual acuity measurement, slit lamp biomicroscopy, Goldmann applanation tonometry, A-Scan biometry and dilated

fundus examination with indirect ophthalmoscopy. Examination took place pre-operatively (T0), every 7 days during the first month (T1) and every 15 days during the second one (T2). Surgery was carried out performing indentation with an elastic silicone band 2.5 mm wide, associated with silicone scleral buckling. The ends of the band were joined together by a knot tied with an absorbable polyglactin 910 thread (Vicryl 6/0).

Results: Post surgery mean axial length was 0.58 mm (maximum 0.92; minimum 0.27 mm) at T1 and 0.50 mm (maximum 0.77 mm; minimum 0.31 mm) at T2 while mean myopization was equal to -2.10 D (maximum -3.50D; minimum -1 D) at T1 with mean modification of the refraction of + 1.50D (maximum +3D; minimum +1D) at T2. A comparison between T0 and T2 showed that the change in axial length was on the average + 0.07 mm (maximum +0.30 mm; minimum -0.03 mm) with mean myopization equal to -0.125D (maximum +1D; minimum -1D).

Conclusions: Changes in refraction that occur after surgery are transitory. 60 days postoperatively, refraction and axial length of the eyes changes, as compared to preoperative values, and they was less if compared to surgery in which closing of the scleral buckling was carried out with not absorbable thread.

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Keywords: Retinal Detachment Surgery, Scleral Buckling, Refraction, Axial Length.

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Scleral Drainage of Subretinal Fluid in Retinal Detachment Surgery

Romualdo Malagola¹, Luigi Pannarale², Chiara Komaiha¹, Loredana Arrico¹

¹University Department of Ophthalmology Sapienza, Rome, Italy; ²University Department of Anatomy Sapienza, Rome, Italy

Introduction: We report the surgical outcomes of a single series of patients who received scleral surgery for primary retinal detachment using a modified sclerotomy for the drainage of the subretinal fluid.

Methods or Study Design: One hundred-twenty eyes of patients with primary retinal detachment underwent scleral buckle placement with modified sclerotomy for drainage of the subretinal fluid. A scleral pocket parallel to corneal limbus and positioned behind the scleral buckle was executed. Postoperative and surgical data were collected.

Results: The subretinal fluid was successfully drained in all eyes. The reattachment rate was 95%. In 90% of cases one single sclerotomy was necessary, in 10% two consecutive scleral pockets in different sites were performed. Intraoperatively, subretinal haemorrhage occurred in 2.5% of eyes and controlled choroidal detachment in 0.8%. At the drainage site no retinal holes or vitreoretinal incarceration were recorded.

Conclusions: This modified sclerotomy drainage technique appears a useful, effective and safe method to drain the subretinal fluid. The high retinal reattachment rate and the low complication rate suggest that this technique may represent a valuable alternative to other subretinal fluid drainage procedures.

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Keywords: Drainage of Subretinal Fluid, Retinal Detachment Surgery, Sclerotomy.

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Rhegmatogenous Retinal Detachment Surgery: Complications and Its Risk Factors

Vanessa Lemos, Ana Cabugueira, Arnaldo Santos, Luisa Vieira, Ana Amaral, Nuno Marques, João Branco

CHLC, Lisboa, Portugal

Introduction: Despite the evolution of the instruments, complications continue to be part of vitreoretinal surgery.

Purpose: To evaluate functional and structural outcome of patients undergoing Rhegmatogenous Retinal Detachment (RRD) surgery and its complications. And to identify risk factors for these complications.

Methods or Study Design: A retrospective study of 96 eyes with RRD that underwent pars plana vitrectomy, Laser and/or cryotherapy and tamponade with/without scleral indentation. Best corrected visual acuity (BCVA) was assessed with Snellen chart and converted to logMAR. We also analyzed the following parameters: age, gender, history of glaucoma, diabetes mellitus, high myopia (>6D), pre and post operative intraocular pressure and medication, postoperative complications and previous ophthalmic surgery.

Results: Surgical mean age was 59.6 ± 16.1 years, 64.6% were male. Mean postoperative follow-up of 18.4 ± 6.5 months. There was a significant improvement in mean postoperative BCVA 0.52 ± 0.52. Postoperatively, eyes with macula on (0.4 ± 0.52) showed a significantly higher BCVA than with macular off (-0.41 ± -0.38). Postoperative complications were recorded: cataract (50%), increased intraocular pressure (44.7%) redetachment (19.8%), epiretinal membrane (13.5%), cystoid macular edema (3.1%), macular hole (3.1%) and subretinal fluid (2.1%). 87.5% of the eyes that developed cataract underwent Laser, 33.3% cryotherapy, 66.7% scleral buckle, 58.3% SF6, 4.2% C3F8, and 33.3% silicone oil. Approximately 32% of eyes with SF6 and 67% with silicone experienced an increase in intraocular pressure (p < 0.05). It was found that development of epiretinal membrane was more frequent in patients older than 60 years (61.5%). The factor with significant correlation with retinal redetachment was postoperative follow-up time. In the cystoid macular edema subgroup, stands out pseudophakia (p < 0.05).

Conclusions: In conclusion, we highlight the importance of evaluating the functional and structural components of the preoperative RRD, since they have an important role in predicting the surgical success, as well as timely follow-up of these patients to prevent, diagnose and treat its complications.

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Keywords: Rhegmatogenous Retinal Detachment, Vitreoretinal Surgery, Complications, Risk Factors.