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SHORT TERM OUTCOMES OF A NOVEL TECHNIQUE OF COMBINED BUCKLE AND SCLERAL IMBRICATION FOR COMPLEX RETINAL DETACHMENTS.

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Introduction:

Complex pediatric onset retinal diseases can develop complication of rhegmatogenous retinal detachment along with exudative retinopathy and tractional detachment that are difficult to reattach. This study is to report short term treatment outcomes of a novel technique of combined scleral buckle with modified scleral imbrication for predominantly childhood onset retinal detachments with varying proportion of rhegmatogenous, exudative and tractional component.

Materials and methods:

A retrospective analysis of 24 eyes operated with the novel technique are reported. The surgical technique included modified scleral imbrication, combined with use of an encircling band with or without a buckle (tire). Additional procedures could include cryopexy, subretinal fluid drainage, paracentesis or retinal laser. No vitrectomy procedures were done at initial surgery. Imbrication was done in 2 or more quadrants in all cases. Buckle size used included styles 42, 287 and 289 depending on extent of pathology and age of the child. Follow-up was done at least every 3 months for first year and six monthly thereafter. Fundus photos, Ultrasound and OCT helped document retinal status. Refraction, functional vision and visual acuity was monitored for visual outcomes

Results:

Age at time of surgery ranged from 3 months to 14 years (mean 6 years). Diagnosis included ROP (17 eyes); FEVR (4 eyes) and miscellaneous (3 eyes). Types of detachment included rhegmatogenous with tractional and/or exudative component (13 eyes); progressive tractional detachment (7 eyes); tractional with exudative detachment (two eyes) and rhegmatogenous with abnormal vitreous adhesions (2 eyes). Retina showed complete attachment (with or without dry folds) and no progression of disease in 19 eyes (79%). Of five eyes with incomplete resolution, one had successful vitrectomy surgery with oil and later oil removal, two eyes were deemed to be inoperable as disease was already too advanced at initial presentation and two eyes had only partial reattachment and refused further surgery due to poor prognosis.

Postoperative visual acuity was stable or improved in six older children where it could be recorded. Transient increase in intraocular pressure was noted in 30 percent eyes, that was managed with topical medication and completely resolved over 6-12 months of follow-up. Myopic shift post operative

was noted in eyes with attached retina. No other postoperative complication was noted at mean follow-up of 9 months.

Conclusions:

Every eye operated by this technique was extremely challenging. The novel technique provided a new way of managing these complex childhood onset retinal detachments successfully with a single surgery, that otherwise would have required multiple vitreoretinal procedures using silicone oil, often with variable and unpredictable outcomes. Long-term outcomes are awaited.

Sources:

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