

Aims To determine if there is a sustained difference in colour perception after short-term use of RLRL.

Methods Participants aged 6–25 years old who met the eligibility criteria were recruited and underwent visual acuity assessment, macular optical coherence tomography (OCT), and colour vision assessment using the colour assessment diagnosis (CAD) test. After this, they came for three visits where they received RLRL. The CAD test was performed immediately after and repeated after a 5-minute interval. At the next appointments, this process was repeated, with a final OCT scan taken at the end. Participants were asked to report about their experience using RLRL.

Results A significant difference in colour perception was observed between measures immediately after exposure to RLRL and after 5-minutes at each visit ($P < 0.01$ for all). Use of the machine after 3 doses of red-light therapy over two days demonstrated no significant change to colour perception ($P > 0.05$). Participant results indicated that they'd likely use RLRL for myopia management (median score=4 out of 5).

Conclusion RLRL appears to only have an immediate, reversible effect on colour perception returning to normal after 5 minutes, with no visual effects, suggesting its safety in short-term use. Further research on longer term use is required.

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KERATOPIGMENTATION FOR TRAUMATIC GLARE AFTER PHACOEMULSIFICATION

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Introduction Keratopigmentation was first documented almost 2000 years ago, using reduced copper sulphate to mask a corneal leucoma. Over time, copper was replaced with metallic powders, allogeneic uveal pigment and both Indian and Chinese ink.

Aims Keratopigmentation was used to improve cosmetic appearance and sight and decrease light scattering and glare.

Methods A 73-year-old man was referred to the corneal clinic with ongoing glare, intermittent monocular diplopia and photophobia after a complex phacoemulsification which left an iris defect at the 9 o'clock position.

Seven months after cataract surgery, visual acuity was 6/9 bilaterally, with an IOP of 14mmHg in the affected eye.

After discussion regarding the risks and benefits (failure-no symptomatic improvement, visual field loss, loss of visual acuity, corneal decompensation, further surgery (including iris prosthesis), colour change/fading, neovascularisation the patient consent and wished to be listed for corneal tattooing.

The procedure was performed in the Ophthalmic Theatre Suite. Kandahar ink was used as has fewer incidences of reaction due to its composition.

An intrastromal technique was used to aid ink distribution and stability.

The patient was given some steroids and antibiotic drops to use after the surgery.

Results The patient was reviewed four weeks later and reported that glare symptoms had settled. After 10 weeks the corneal suture was removed.

His glare had improved further, with corrected visual acuity 6/6 with pinhole.

Conclusion Keratopigmentation is an effective way of managing the resultant glare and photophobia, improving quality of life. It represents a simple, low risk alternative for many other indications besides iris trauma.

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A CADAVERIC DEMONSTRATION OF A NOVEL SURGICAL APPROACH FOR TREATMENT OF PTOSIS

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Introduction Frontalis suspension surgery (FSS) is the established surgical treatment for severe ptosis. Limitations of this technique includes need for patient engagement to raise the eyelid, oedema and infection at the incision sites, as well as facial scarring. This study carries out an anatomical investigation into an alternative surgical approach which aims to minimise these limitations.

Aims To carry out a cadaveric demonstration of surgical techniques, comparing FSS to an alternative approach.

Methods A fresh frozen cadaveric head specimen was used to demonstrate the FSS procedure and the alternative approach. Outcomes were recorded by photographs. This included the post-operative palpebral fissure height (PFH), as well as the capacity for the eyelids to close post-operation. The aesthetic outcome of both procedures was also analysed.

Results The proposed surgical technique and the FSS method both achieved a post-op PFH measurement within the normal range at 7mm following procedures. The study also demonstrated that the proposed technique allowed for full eyelid closure against the retracting tension of the sling. The aesthetic outcome of the proposed surgical method was superior to the FSS technique by achieving a natural eye contour while eliminating brow incision scars.

Conclusion The study presents a successful cadaveric demonstration of a novel surgical procedure for treatment of severe ptosis. This procedure offers resolutions for multiple adverse effects of FSS, as well as functional and aesthetic limitations. However, the higher risk of lagophthalmos is an anticipated concern. This requires further research into the mechanical compatibility of this technique in vivo.

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CHARACTERISATION OF HUMAN PHARC FIBROBLASTS HARBOURING A NONSENSE MUTATION IN *ABHD12* GENE AND SUBSEQUENT GENERATION OF A iPSC LINE

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Introduction Several mutations in *ABHD12* gene have been linked to PHARC syndrome, and nonsense mutations represent almost one third of the reported mutations in PHARC. The use of induced pluripotent cells (iPSC) helps to create faithful models to investigate the pathological mechanisms operating in the retina of PHARC patients, and thus facilitates the assessment of potential therapeutic interventions.