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A Retrospective Analysis of Visual Outcomes in Patients undergoing a Single Session of Cyclodiode Laser Therapy

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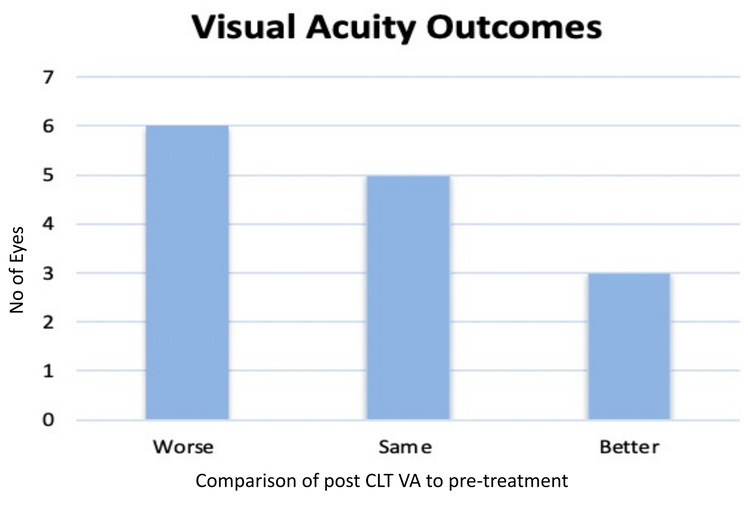
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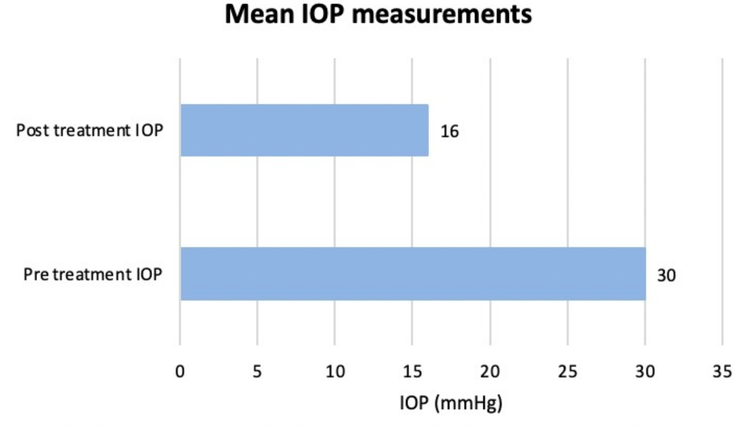
Background: Cyclodiode Laser Therapy (CLT) can be used in refractory glaucoma which has not responded to medical and/or surgical alternatives. Concerns on CLT's effect on visual acuity (VA) have created caution among clinicians with using CLT on patients with good visual potential. Therefore, we undertook a retrospective case series to analyse the outcomes of patients with visual potential undergoing a single session of CLT.

Aim: To observe outcomes of patients with a VA LogMAR 1.0 or better undergoing a single session of CLT.

Methods: The Medisoft audit tool was used to retrospectively identify patients who underwent a single session of CLT from July 2016 to January 2022, under one surgeon. The inclusion criteria was eyes that had undergone only a single session of CLT with a VA of logMAR 1.0 or better. Eyes undergoing multiple sessions of CLT, including another procedure alongside with CLT, or with a VA less than logMAR 1.0 were excluded.

Outcome measures: Indication for CLT, pre-operative VA and intra-ocular pressures (IOP) and post-operative VA and IOP at 6 months.





Results: Over the 65 month study period 47 eyes received CLT under one surgeon. However, only 14 met our inclusion criteria. The most common indication for CLT was unsuitability for surgery or patient declining surgery for better IOP control.

Following a single session of CLT, at 6 months 57% of eyes had a VA same or better than the pre-operative VA.

Intra-ocular pressure measurements were only available for 10 eyes. **Among these 10 eyes, there was a mean IOP reduction of nearly 50% post CLT at 6 month review.**

Conclusion: Cyclodiode laser therapy is an effective option in reducing IOP in patients who are unsuitable for surgical and/or medical management who still have visual potential. It is less harmful to VA than previously thought as 57% of eyes in our study had no VA decline at 6 months. Randomised controlled trials with a larger sample sizes and longer duration of follow up are recommended.