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Introduction

A study was conducted to evaluate the safety and effectiveness of a novel treatment for amblyopia using a binocular eye-tracking-based device - CureSight

![CureSight](Image)

Methods

- 20 anisometropic or mixed amblyopia children aged 4-16 (8.08±3.2 years) were enrolled
- Task: watching a dichoptic movie of their choice for 1.5 hours/day 5 times a week / 12 weeks, followed by three weekly sessions for an additional 12 weeks

End Points

- Primary endpoint: amblyopic eye best corrected visual acuity (VA) improvement at 24 weeks
- Secondary endpoints: binocular VA and stereoacuity improvement at 24 weeks
- Exploratory endpoints: adherence, adverse events, satisfaction and reading performance

Results

**Visual acuity improvement**

- Significant distance amblyopic eye VA improvement at 24 weeks was recorded
- Significant binocular VA and stereo acuity improvement at 24 weeks
- 95% mean adherence at 24 weeks
- Amblyopic eye VA and stereo acuity remained stable at one year follow-up

![VA improvement at each follow-up visit](Image)

**Stereo acuity**

![Stereo Acuity](Image)

**Reading test**

![Reading test](Image)

Adverse events: no severe events reported
Satisfaction: 95% would recommend the treatment to others

Conclusions

The CureSight system is a potentially effective home treatment for amblyopia, with high adherence and satisfaction with no difficulty in fitting or calibration. Improvement of binocular VA may indicate a reduction in interocular suppression.