Atropine, what dose to use in myopia control?

Rasha Al-Taie

THE PREVALENCE OF MYOPIA IS ON THE RISE

Is high myopia preventable? “Yes”
ATOM 2 (phase 1): To compare efficacy and visual side effects of 3 lower doses of atropine: 0.5%, 0.1%, and 0.01%. Atropine 0.01% retains comparable efficacy in controlling myopia progression.

Atropine is unlikely to block progression through accommodative block, and experiments suggest that atropine acts mainly through the M4 subtype of muscarinic receptor.

Conclusions: The 0.05%, 0.025%, and 0.01% atropine eye drops reduced myopia progression along concentration-dependent response. All the concentrations were well tolerated without an adverse effect. Of the 3 concentrations used, 0.05% atropine was the most effective in controlling SE progression and AL elongation over 1 year.

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Title: Atropine - What dose to use in myopia control

**Over 2 years**

Spherical equivalent progressed

- **0.05%**: 0.55±0.35 D
- **0.025%**: 0.85±0.73 D
- **0.01%**: 1.12±0.85 D
  
  (0.27-1.197)

Axial length

- **0.05%**: 0.39±0.35 mm
- **0.025%**: 0.5±0.33 mm
- **0.01%**: 0.59±0.38 mm
  
  (0.21-0.97)

**Some questions**

- Low dose atropine - stability, container, Temp, PH...
- Rebound

**MOSAIC**: is the first RCT to explore the efficacy, safety and mechanisms of action of unpreserved 0.01% atropine in a predominantly White population.

**Champ study**: is a multi-center FDA drug trial that studies the long-term safety and efficacy of low-dose atropine eye drops on myopia progression control.

**Conclusion**

- Although atropine slows myopia progression in children, further studies are required about its efficacy.
  
  We can start at lower dose and increase it accordingly.
  
  - Watch the horizon for further studies.

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**Thank you very much**