

January 2021

Surgical Outcomes for Esotropia in Children with High AC/A ratio

Sabrina E. Dass
fi2094@wayne.edu

Monique Cheng
mocheng@med.wayne.edu

Reecha S. Bahl
reecha.sachdeva@gmail.com

Follow this and additional works at: https://digitalcommons.wayne.edu/som_srs

 Part of the [Medicine and Health Sciences Commons](#)

Recommended Citation

Dass, Sabrina E.; Cheng, Monique; and Bahl, Reecha S., "Surgical Outcomes for Esotropia in Children with High AC/A ratio" (2021). *Medical Student Research Symposium*. 67.
https://digitalcommons.wayne.edu/som_srs/67

This Research Abstract is brought to you for free and open access by the School of Medicine at DigitalCommons@WayneState. It has been accepted for inclusion in Medical Student Research Symposium by an authorized administrator of DigitalCommons@WayneState.

TITLE: Surgical outcomes for esotropia in children with high AC/A ratio

PURPOSE: To assess if high accommodative convergence/accommodation (AC/A) ratio impacts surgical outcomes in children with esotropia (ET).

METHODS: A retrospective chart review identified patients who underwent primary bilateral medial rectus (BMR) recessions for ET. Patients were excluded if follow up was ≤ 2 months. Basic demographic information, visual acuity, stereopsis, alignment, and target angle for surgery was collected. High AC/A was defined as ≥ 10 prism diopter (Δ) deviation at near compared to distance. Outcome parameters were near and distance deviations $\leq 10\Delta$ within orthophoria, and/or stereopsis postoperatively. Yates' continuity correction, unpaired t-test, regression analysis, and one-way ANOVA were used.

RESULTS: We identified 103 patients, 23 with high AC/A and 80 with normal AC/A, preoperatively. Mean age was 4.0 ± 2.5 years. Surgical success measured by postoperative alignment was 48% and 45% in the high AC/A and normal AC/A groups, respectively ($p=1.0$). There was a statistically significant difference in preoperative near deviation between high AC/A and normal AC/A groups ($p=0.0015$), however there was no significant difference in preoperative distance deviation ($p=0.061$). Additionally, there was not a significant difference in preoperative or postoperative stereopsis between high AC/A and normal AC/A groups ($p=0.88$ and $p=0.44$, respectively). There was a significant difference in the normal AC/A and high AC/A groups when target angle was directed towards preoperative near deviation as determined by one-way ANOVA ($F=170.88$, $p<0.0001$ and $F=14.61$, $p=0.0010$, respectively).

CONCLUSIONS: In the setting of ET treated with BMR recession, the presence of high AC/A does not affect surgical success as measured by alignment and stereopsis.

KEY WORDS: esotropia, high AC/A ratio, strabismus surgery, bilateral medial rectus recession