STEREOPSIS REVISITED

Lam et al provide data that question the use of stereoscopic values in children as an indicator for the absence of high-quality binocular vision (September/October issue).

Lam et al report a random frequency distribution of stereocuity, with more than 40% of normal children demonstrating stereocuity less than 40 seconds of arc. The authors conclude, "Our results seem to indicate that the stereocuity obtained by Randot is not a real measure of a biological function. This is in keeping with Lang's comments that stereocuity measurements often consist of artificial means of estimating true stereocuity. Furthermore, the random distribution of scores we obtain with this test among normals does not readily lead to the identification of a cut-off value separating them from normals."1

Burian,2 Fisher,3 and Romano and Romano4 reached a similar conclusion; that a lessor degree of stereocuity, or even the absence of stereocuity, cannot per se be construed to indicate defective binocular vision in normal children.

Yet a different view seems prevalent that defines "high quality" central fusion by levels of stereocuity between 14 and 40 sec arc and "lesser quality" peripheral fusion be levels between 67 and 1000 sec arc.6,7 As children with early onset esotropia allegedly achieve only stereocuity levels less than 40 sec arc, they are considered to have an inherent inability to develop higher-quality central fusion.7

This belief further holds that only early surgery would provide the opportunity for these children to obtain lesser quality peripheral fusion. The proponents of this view have established a critical age beyond which surgery should not be delayed.7 This critical age for surgery was initially reported at 6 months,8 then was revised to 12 months,7 later was adjusted to 18 months,9 and finally, carved in granite, at 24 months,10 where it presently rests,11,12 but not in peace.

Congratulations, once again, to Lam et al for providing fresh scientific data on the variability of ophthalmological parameters in normal children and reiterating that our tests for stereocuity may not be a real measure of a biological function, nor provide a cutoff value separating normal from abnormal children. If their data are reconfirmed (yet again), is it possible that not all children with early onset esotropia have an inherent inability for high-quality binocular vision and that cure may be obtainable, even after 24 months of age?

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REFERENCES

ACQUIRED DUANE'S RETRACTION SYNDROME

We want to thank Dr Brodsky for his interest and comments in the November/December issue regarding our article, "Acquired Duane's Retraction Syndrome."
Brodsky mentioned Jampolsky's comments about increasing symptoms of Duane's retraction syndrome with the progressive contracture of misinnervated lateral rectus muscle in asymptomatic Duane's retraction syndrome patients. To our knowledge, there is only one published report about the progressive features of Duane's retraction syndrome.

Noonan and Connor reported that the incidences of severe retraction on adduction, the occurrence of enophthalmos in the primary position, and the presence of upshoots and downshoots were significantly higher in adults with type I Duane's retraction syndrome than in children. All of their patients had some symptoms of Duane's retraction syndrome starting from childhood. To our knowledge, there is no reported case with Duane's retraction syndrome being completely asymptomatic at childhood.

We had the chance to evaluate old pictures of the patient since her early childhood taken at various positions of gaze and could not identify any abnormality until the age of 31, which is in complete agreement with her recent complaints.

Electromyelographic recordings of the patient showed co-contraction of medial and lateral rectus muscles on attempted adduction and no contraction of lateral rectus muscles on attempted adduction that are typical for Duane's retraction syndrome. We believe that if these findings were present in childhood, there must be at least some evident limitation of lateral gaze due to this misinnervation.

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