

# Infantile esotropia: evidence for conservative management in the visually immature where follow-up treatment is unavailable or limited

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The article in this issue of *Eye* by Calcutt and Murray<sup>1</sup> reports the prevalence of, and factors involved in, the development of amblyopia in a series of 113 untreated essential infantile esotropes. The authors define amblyopia as a difference of 2 lines on the Snellen chart, but consider 6/6 as normal visual acuity and therefore do not include subjects achieving 6/6 with their non-preferred eye, even if there was a difference of 2 lines. Sixteen of their 113 cases fell into this category. In 10 of these anisometropia (defined as 1 dioptre or more difference in spherical equivalent) was present. Presence of alternation and a larger angle of deviation were found to protect against amblyopia.

Since Zipf<sup>2</sup> described fixation patterns in relation to strabismics, new methods of testing visual acuity in young patients have become available, such as the Catford drum, preferential looking acuity cards and Cardiff cards. However, such tests have been shown to be less than ideal in detecting amblyopia and consequently (in addition to these visual acuity tests) a return to fixation preference in assessing interocular differences in infant vision has occurred. This can still be misleading and Calcutt and Murray emphasise observation of the point at which alternation occurs to help reduce misdiagnosis of those amblyopes who do cross-fixate, and acknowledge that fixation preference alone is likely to overestimate the presence of amblyopia.<sup>3</sup>

Anisometropia is identified as a factor in the development of amblyopia. However, of 81 non-amblyopes, 16 were anisometric. Ten of these were among 20 patients who showed 1 line difference in visual acuity (not classified as amblyopes) and a further 3 did not achieve normal vision with either eye, demonstrating gross refractive errors (C. Calcutt, personal communication 1998).

By comparison with previously published literature on the prevalence of amblyopia in essential infantile esotropia, the authors conclude that there is a reduced tendency to amblyopia in untreated cases. The question is now posed as to whether early surgery in the hope of achieving some form of binocular vision is justified if amblyopia may develop. The authors state that where access to ongoing therapy is not available, delaying surgery until visual adulthood means that there is a significant chance of retaining good visual acuity in both eyes.

The dearth of literature on how the presence of either amblyopia or a strabismus affects daily life has recently been highlighted.<sup>4</sup> Which, if either, causes the greater disability? Whilst loss of stereopsis is problematic to those used to normal binocular single vision, strabismics generally seem able to adapt. The question of what advantages a person with abnormal binocular single vision has in daily life compared with a person with no form of binocular single vision is unanswered.

In countries where eye care is readily available we can strive for what we perceive as an ideal and discuss the benefits of abnormal binocular single vision in the prognosis of strabismus. (We must not forget, however, that whilst the follow-up care is available, some patients will not attend to take advantage of this or comply with treatment.) In countries where treatable conditions such as cataract and trachoma result in blindness another aspect presents itself. Trauma is often the most important cause of unilateral loss of vision, particularly in developing countries; other causes include cataract, corneal scars of various causes, phthisis bulbi, infections and staphyloma.<sup>5-8</sup> Thus the need for reasonable visual acuity in the 'reserve eye' may be more important than in developed countries. In cases

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where treatment is ongoing, amblyopia may not be a problem following early surgery for infantile esotropia, but evidence does exist for a fixation preference and development of amblyopia post-operatively.<sup>9</sup>

The authors, in presenting these data, give an inherent warning to those who may be involved in patient management where follow-up care is limited, to consider their preferred outcome before suggesting early surgery for essential infantile esotropia.

### References

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