

## Unnecessary surgery in fully refractive accommodative esotropia

Unnecessary strabismus surgery is an issue discussed at a symposium held during the Sixth Congress of the International Strabismological Association (ISA) in Queensland, Australia (11-16 March, 1990)<sup>1</sup>, and the undersigned believe that ophthalmologists need to be appraised of the outcome of this symposium.

The symposium exclusively considered only fully refractive accommodative esotropia, i.e., those patients whose esotropia is fully corrected with glasses, or contact lenses. The issue was clearly focused on this entity and not on patients with partially accommodative esotropia, or other entities, where surgery might be indicated.

The discussants were divided into two opposing groups. One group composed of Drs. Gobin (Belgium), Berard (France) and Molteno (New Zealand) proposed that surgery should be performed in children with fully refractive accommodative esotropia. This view was opposed by the undersigned who insisted on conventional treatment, i.e. optical correction of the hypermetropic refractive error.

Surprisingly, Dr. Gobin admitted to the Symposium that “the advantage of glasses is that surgery could be avoided”, but that surgery was “preferred”. This dramatic admission changed the discussion and the issue completely. In other words, if surgery can be avoided by glasses, then it is clear that unnecessary surgery is being advocated. Whatever rationale may follow such a statement, it is secondary to the recognition that the surgery is *unnecessary*.

The rationale for surgical treatment advocated by the proponents of surgery is based upon the alleged necessity to “reduce the cyclovertical incomitance which presents an important obstacle to fusion”, and, that “torsion, in addition to hypermetropia, causes esotropia”, and, that “most often, there is a progressive worsening of the binocular state in fully refractive accommodative esotropia”. Further rationale is that Gobin “no longer believes that hypermetropia causes esotropia”<sup>2</sup>, and that “after successful cyclovertical and horizontal muscle surgery, the accommodative component decreases or is eliminated”.

The methods of examination for pre- and post-operative evaluations of the deviations used by Dr. Gobin and his school, are inadequate to diagnose the deviation,

since “the angle of squint is measured without spectacles at 1 meter from the Maddox cross”. It is patently obvious that estimating the size of the angle of strabismus on the basis of a corneal reflection, with a light as a fixation target at 1 meter, is an entirely inadequate method to evaluate the deviations in patients with uncorrected fully accommodative esotropia. Unless accommodation is fully controlled at near and distance fixation, by choice of an appropriate accommodative fixation target, and unless the refractive error is fully and adequately corrected, no useful information can be derived from such ‘measurements’.

The ISA Symposium brought out discussion of a recent multicenter study from Belgium and The Netherlands<sup>3</sup>, which decried the lack of quantified scientific examination data, by which the multicenter group could analyze and incorporate Gobin’s measurements into the group’s data. And further, the Belgium/Netherlands study failed confirm the contention that the accommodative element can be removed by oculorotary muscle surgery.

The proponents of unnecessary surgery versus glasses for these selected cases presented data at the Symposium revealing that more than one surgical procedure was usually necessary, without evidence that good stable, bifoveal fusion was re-established. Additionally, 27 of 121 operated patients (22%) who had 4-muscle surgery returned with visual complaints, which were treated either with long-acting miotics, or required glasses. Also emphasized by the undersigned, was the occurrence of post-operative asthenopia due to uncorrected hypermetropia, the unnecessary risk of producing amblyopia by failing to correct the high hypermetropic errors, and diplopia in consecutive exotropias.

The issue then clearly becomes a moral-ethical one for ophthalmologists who have a clear choice of either prescribing glasses that will eliminate the strabismus, or recommending an unnecessary operation with the possibility of additional surgery in the future, with the risk of asthenopia after removal of the glasses, of producing amblyopia, or post-operative diplopia, and without assurance that pre-existing fusion will be re-established by the operation(s).

Parents are easily lured into surgery, with the prospect that their child may discard glasses, and in the hope of

avoiding the nuisance and difficulties of wearing glasses. But parents are not always fully informed, and may not fully *understand* that glasses may probably be needed later, even after more than one surgery.

One of the proponents for this unnecessary surgery on the cyclorotary and horizontal muscles, commented that "this type of surgery must be confined to highly specialized motility centers". Indeed, it is now the hope and expectation that such surgery will be confined to very, very few centers indeed, namely those in which, admittedly, unnecessary surgery is being performed.

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