ECRONICON OPEN ACCESS

OPHTHALMOLOGY
Editorial

Accommodative Esotropia

KK Yadav*

Department of Ophthalmology, Banaras Hindu University, India

***Corresponding Author:** K K Yadav, Department of Ophthalmology, Banaras Hindu University, India.

Received: October 01, 2015; **Published:** October 05, 2015

Strabismus is a condition of misalignment of the eyes and may be classified on the basis of direction ,frequency ,laterality ,time of onset (congenital or acquired), comitant or incomitant, involvement of accommodative system (accommodative/partial accommodative or non-accommodative), state of vergence system, comparing the magnitude of the distance and the near deviation (convergence insufficiency or divergence- excess exotropia; divergence-insufficiency or convergence-excess esotropia; basic esotropia or basic exotropia).

Accommodative esotropia (ET) a most common forms of childhood strabismus, is defined as the convergent deviation of the eyes associated with activation of the accommodative reflex. Since it is totally preventable and if timely action taken, it can be easily managed by correction of refractive error or use of proper glasses. The childhood strabismus prevents development of normal vision in deviated eye. Vision can be permanently reduced (amblyopia) in one eye if it is not "used" properly during childhood, and fine depth perception (stereoscopic vision) may never develop. If strabismus is diagnosed and treated early, then vision development can proceed normally. There has been discussion at various platforms about its age of onset, mechanism of development and pathophysiology. It is well agreed that accommodative esotropia is result of over-exertion of accommodation leading to over-convergence which precipitates as eso-deviation.

The symptoms are mainly asthenopic and are related to visual demands made on the eyes, poor performance of children and periodic double vision. Parents may notice an inward or upward deviation of one eye relative to the other eye. Family history of strabismus or related diseases is common. The age of onset of strabismus should be noted.

Following few points about accommodative ET are discussed:

1. How much hyperopia causes refractive eso?
2. At what stage refractive eso starts precipitating in abnormal deviation?
3. How much refractive correction needed?
4. Use of bi-focal glasses.
5. Incorporation of prism in the glasses.
6. At what time and what kind of Surgery needed?

On the basis of our ongoing work for past 25 years on this subject, it is observed that bilateral hyperopia of +4 to +9 D can cause accommodative esotropia in child exerting accommodation for near work. It has been observed that even in same amount of hyperopia some kids do not develop eso-deviation because they need not to focus for near work. Accommodative ET may not appear in high degree of hyperopia as the eyes maintain their alignment without seeing the objects clear. This is because in very high degree of hyperopia , patients are not able to see things clearly in spite of their maximum accommodative efforts. Therefore, such patients leave the things unclear and translate to bilateral amblyopia.

The child born with hyperopia develops refractive ET in 1 to 6 years of age for diagnosis purpose, in addition to routine orthoptic examination, history; refraction (under cyclopgia) and ocular deviation (under cycloplegia with full refractive correction) and AC/A ratio should be included. Differential diagnosis to rule out Cranial Nerve 6 palsy, Duans syndrome Basic, acute, and cyclic esotropia, Divergence insufficiency and Spasm of the near synkinetic reflex, may be considered when needed.

Regarding the treatment part, initially we need to prescribe full hyperopic correction. Leave the child on one month and advise him to relax from the tendency & habit of over-exertion of accommodation. On next visit of patient, angle of deviation with best corrective glasses is re-assessed for near and distance. In children with higher deviation for near as comparison to distant with high AC/A ratio, the deviation can be reduced significantly by prescribing additional power for near as bifocal for next six weeks. In later visits, this additional power of glasses is reduced gradually and finally removed.

Distance manifest deviation is to be corrected by prism or surgery. The low-grade ET may be corrected by incorporating the prism in hyperopic correction spectacles. One can again leave the patient with this correction for next 6 weeks. At this stage, if you still find residual ET, it should be corrected surgically. After surgery, give enough time (up to 6 weeks) to settle the deviation.

For distance manifest deviation of high grade ET (> 20 Prism D), surgery is the only option. Surgery must be aimed at the basic deviation with the goal to align the eyes, regardless of whether it is a latent, intermittent, or manifest deviation. It is preferable to establish a secondary exophoria rather than a residual esophoria, as the convergence fusional movements and voluntary convergence are more effective than the divergence mechanism in keeping such a residual heterophoria in check.

Volume 2 Issue 3 October 2015