SECTION I. ESOTROPIA

INTRODUCTION

DISEASE DEFINITION

Strabismus describes any binocular misalignment. The most common types are esotropia (inward deviation) and exotropia (outward deviation). Esotropia is a convergent misalignment of the visual axes. The scope of this section is limited to the nonparalytic, nonrestrictive form of the disorder with onset in childhood and with minimal or no limitation in range of motion of the eyes.

Esotropia can be categorized in a variety of ways, usually based on age of onset or underlying causes:

- Infantile esotropia
- Acquired esotropia
  - Accommodative esotropia
    - Normal accommodative convergence/accommodation (AC/A) ratio
    - High AC/A ratio
  - Partially accommodative esotropia
  - Nonaccommodative esotropia
- Sensory esotropia
- Other (e.g., Duane syndrome, congenital fibrosis syndrome)

Infantile Esotropia

Infantile esotropia presents before the age 6 of months.[4] Intermittent esotropia during the first 3 months of life[5-11] may occur and does not necessarily predict the development of constant strabismus. The presence of esotropia is confirmed by the cover-uncover test or Hisrchberg light reflect test in younger children, and it is generally measured using the prism and alternate cover test or Krimsky test. Children with infantile esotropia are at risk for amblyopia, although the presence of cross-fixation may diminish this risk prior to surgical correction. Characteristics of infantile esotropia include the following:

- Onset before the age of 6 months without spontaneous resolution
- Nonaccommodative or partially accommodative etiology
- A constant angle of deviation that may increase with time[12]
- Frequent cross-fixation with the fixing eye in adduction

Additional features that may not be present at the time of diagnosis include latent or manifest latent nystagmus (see Detection of Nystagmus section under Examination), dissociated vertical deviation, oblique muscle dysfunction, A or V patterns, and optokinetic nystagmus asymmetry for nasal versus temporal pursuit.

Acquired Esotropia

Acquired forms of esotropia typically develop after age 6 months and may be accommodative, partially accommodative, or nonaccommodative. These children are at risk for amblyopia.[13]

Accommodative Esotropia

Characteristics of accommodative esotropia include the following:

- An accommodative component that is usually associated with hyperopia
- Typical onset between the ages of 1 and 4 years,[14] with an average age of onset of approximately 2 years.[4] However, it may appear in infancy,[4, 15, 16] in older children,[17] or develop after surgical correction of infantile esotropia[18, 19]