

## **PSEUDOSTRABISMUS**

is the clinical impression of ocular deviation when no squint is present.

- Epicanthic folds may simulate an esotropia.
- Abnormal interpupillary distance, if short may simulate an esotropia and if wide an exotropia.
- Angle kappa is the angle between the visual and anatomical axes.
  - A large positive angle kappa may give a pseudoexotropia .
  - A negative angle kappa it may simulate an esotropia

occurs when the fovea is situated nasal to the posterior pole (e.g. high myopia). In this situation, the corneal reflex is situated temporally to the center of the cornea

## **SQUINT is either:**

- **Manifest (heterotropia):** is a squint present when both eyes are open.
- **Latent (heterophoria):** is a squint seen only when one eye is covered.

## **Heterophoria (Latent squint)**

is not seen normally when both eyes are opened, but when we occlude one eye it will deviate behind the cover, but as we remove the occluder there will corrective movement which is not seen in normal person.

- **Eso-**= inward,
- **Exo-**= outward,
- **Hyper-**= Elevation,
- **Hypo-**= depression.

phoria may present clinically with associated visual symptoms when the fusional amplitudes are insufficient to maintain alignment, particularly at times of stress or poor health.

## **Etiology**

- **1. Uncorrected errors of refraction:**
- **Hypermetropia:** the patient uses excessive accommodation to see clearly. As a result, excessive convergence occurs with accommodation which causes latent convergent squint.

- **Myopia:** the patient relaxes his accommodation which results in lack of convergence and the concurrent divergent squint.
- 2. Congenital weakness of one or more of extra ocular muscles.

• **Signs:** Both esophoria and exophoria can be classified by the distance at which the angle is greater: respectively, convergence excess or weakness, divergence weakness or excess and mixed.

Vertical phoria are caused by abnormal ocular motility

### Examination:

- The idea is to abolish the stimulus for binocular single vision (BSV) by covering one eye (cover test).
- Ask the patient to fix object.
- Each eye is covered separately.
- The occluder is quickly removed and the examiner notes whether or not the eye under cover had deviated.
- The examiner must also note if the eye makes a movement inwards or outwards to pick up fixation once cover is removed.
- If the covered eye deviates under the cover and when the cover is removed returns to the original fixing position, latent squint is present.

### Treatment

- Orthoptic treatment is of most value in convergence weakness exophoria.
- Any significant refractive error should be appropriately corrected.
- Symptom relief may otherwise be obtained using temporary stick-on Fresnel prisms and may be subsequently incorporated into spectacles (maximum usually 10–12 Δ, split between the two eyes).
- Surgery may occasionally be required for larger deviations.

## VERGENCE ABNORMALITIES

### *Convergence insufficiency (CI)*

typically affects individuals with high near visual demand, such as students.

- **Signs.** Remote NPC independent of any heterophoria and poor fusional convergence amplitudes.
- **Treatment** involves orthoptic exercises aimed at normalizing the near point and maximizing fusional amplitudes. With good compliance, symptoms should be eliminated within a few weeks but if persistent can be treated with base-in prisms.
- **Accommodative insufficiency (AI)** is occasionally also present. It may be idiopathic (primary) or post-viral and typically affects school-age children. The minimum reading correction to give clear vision is prescribed but is often difficult to discard.

### *Divergence insufficiency*

Divergence paresis or paralysis is a rare condition typically associated with underlying neurological disease, such as intracranial space-occupying lesions, cerebrovascular accidents and head trauma.

**Presentation** may be at any age and may be difficult to differentiate from sixth nerve palsy, but is primarily a concomitant esodeviation with reduced or absent divergence fusional amplitudes. It is difficult to treat; prisms are the best option.

### *Near reflex insufficiency*

- **Paresis** of the near reflex presents as dual convergence and accommodation insufficiency. Mydriasis may be seen on attempted near fixation.

Treatment involves reading glasses, base-in prisms and possibly botulinum toxin (orthoptic exercises have no effect). It is difficult to eradicate.

- **Complete paralysis** in which no convergence or accommodation can be initiated may be of functional origin, due to midbrain disease or after head trauma; recovery is possible.

### *Spasm of the near reflex*

Spasm of the near reflex is a functional condition affecting patients of all ages (mainly females). Diplopia, blurred vision and headaches are the presenting symptoms.

- **Signs**

- Esotropia, pseudomyopia and miosis.

- Spasm may be triggered when testing ocular movements
- Observation of miosis is the key to the diagnosis
- Refraction with and without cycloplegia confirms the pseudomyopia, which must not be corrected optically.
- **Treatment** involves reassurance and advising the patient to discontinue any activity that triggers the response. If persistent, atropine and a full reading correction are prescribed but it is difficult later to abandon treatment without recurrence. Patients usually manage to live a fairly normal life despite the symptoms.