



AMBLYOPIA

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REVIEW ARTICLE

ABSTRACT

AMBLYOPIA is commonly known as LAZY EYE. It is a vision development disorder, which affects eyes and the brain during infancy and childhood. It signifies that the eye does not achieve a normal visual acuity even with refractive correction in form of glasses or contact lens. During normal visual development, the eye and brain learn to see and develop binocularity that is the ability to perceive depth (stereo acuity). This occurs in the first 8 to 10 years of life. Each eye transmits clear and identical images from retina to the brain, which fuses the two images into the single image with 3 dimensions. When the image is formed on the retina of two eyes is too dissimilar, the brain cannot fuse the two images and suppresses the most blurred image. As a result, the worse eye does not learn to see and becomes lazy.

Keywords : *Stereo acuity* - the smallest detectable depth difference that can be seen in binocular vision. *Nearsightedness* - can see objects near to you clearly, but objects farther away are blurry. *Farsightedness* - a vision condition in which nearby objects are blurry. *Blurred vision* - decreased clarity or sharpness in vision. *Glaucoma* - an eye disease that causes gradual loss of sight. *Squinting* - to have eyes that appear to look in different directions at the same time.

INTRODUCTION

INCIDENCE

1 to 4% of population. (Pediatric population ranging from 4.7 to 7.5%)

COMMON CAUSES

- **MISALIGNMENT OF THE EYES OR SQUINT**

STRABISMUS is a condition in which the eyes do not properly align with each other when looking at an object.

Types include

1. Esotropia (eyes crossed)
2. Eyes diverge (lazy eyed)

3. Hyperopia (vertically misaligned)

- **ANISOMETROPIA AMBLYOPIA**

A refractive error in which the light is not focused correctly as it travels through the lens of the eye. Refractive errors occur due to nearsightedness, farsightedness, and blurred vision.

- **STIMULUS DEPRIVATION AMBLYOPIA**

This is the least common form of amblyopia. one eye is prevented from seeing and becomes weaker. This is due to a corneal ulcer, a scar, glaucoma, eye injury, eye surgery.

SIGNS AND SYMPTOMS

- ❖ An eye that wanders inward or outward
- ❖ Eyes that appears to not work together
- ❖ Poor depth perception
- ❖ Squinting
- ❖ Head tilting
- ❖ Abnormal results of vision screening

DIAGNOSIS

- ✓ Complete medical eye examination with cycloplegic drops.
- ✓ Visual acuity

TREATMENT

1. Easy Treatment

- Simple employing eye glasses
- Eye drops – ATROPINE EYE DROPS
- Vision therapy includes eye exercises, visual motor processing activities.

2. Neurological Therapy

- Patching of the unaffected eye with prescribed activities
- Binocular vision exercises - To start the therapy, hold a pencil at arm's length. Draw the pencil towards the nose while keeping a clear focus. Repeat the exercise when the pencil begins to appear as a double vision.
- Accommodation (focusing) tasks

Eye tracking activities:

- Do puzzles
- Use a newspaper or magazine article

- Draw or paint pictures.
- Dot to dot pictures.

- Rapid eye movement and fixation exercises.

3. Eye patching

There is good evidence that 2 hours of patching a day is as effective as 6 hours of patching for moderate cases of amblyopia. In severe amblyopia, patching for 6 hours per day is usually recommended

4. Eye exercises

Hold your pointer finger a few inches away from your eye. Focus on your finger. Slowly move your finger away from your face, holding your focus. Look away for a moment, into the distance. Focus on your outstretched finger and slowly bring it back toward your eye.

PREVENTION OF LAZY EYE

Early detection and treatment of strabismus, astigmatism, cataracts, and other vision problems.

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