Commonest cause of vision defect in children at present in all over the world and the prevalence of about 2-5%. Amblyopia is a Greek word means dull vision (amblys=dull, ops=eye) and this can be in one eye (monocular pattern distortion Amblyopia) or both the eyes (bilateral pattern distortion Amblyopia). This Amblyopia is due to abnormal visual experience during the sensitive period of visual development. Vision is a process for making inferences about the external physical world, based upon information contained in two dimensional retinal images. The final result is seemingly unified visual perception. Interruption or alteration to the functioning of the image processing pathways results in abnormal or incomplete image formation. Amblyopia should not be viewed only as an eye problem but as brain problem too. Newborn infants are able to see but not far. With time vision improves when the baby learns to focus on objects and then to coordinate both eyes into a stereoscopic system. During early childhood years the visual system changes rapidly and vision continues to develop up to eight years (some says nine years). After this period no major developmental maturation occurs in the visual system. If a child fails to use his or her eye normally by this period, improvement of vision would be difficult in that eye. The stronger eye becomes dominant and retains good vision. Other eye with poor vision becomes lazy eye. The earlier the onset of the abnormal stimulation, the greater the visual deficit. The critical period for visual development is somewhat controversial. But most clinician and researcher accept the time frame between one week and 2 months of age. Severe visual loss is expected, if any disruption of vision happens during this period causes severe visual loss.

For practical purposes amblyopia is defined at least 2 snellen lines difference in visual acuity but amblyopia is truly a spectrum of visual loss ranging from missing a few letters on the 20/20 line to hand motion vision. Amblyopia is primarily a defect of central vision, peripheral visual field nearly always remains normal.

Common cause of Amblyopia
Ocular misalignment or strabismus
Uncorrected refractive error
Any disorder that interfere clear image formation and transmission to the brain from the eye.
Ocular misalignment

Strabismus is always associated with strong fixation preference results in constant unilateral suppression of cortical activity related to non-preferred eye (deviated eye). Constant suppression in the visually immature patient results in poor vision of the deviated eye means non-preferred eye.

The most common type of unilateral amblyopia is strabismic amblyopia. Strabismic amblyopia is most commonly associated with Esotropia but this can also be seen in Exotropia. More than 50% of strabismic amblyopic cases are due to Infantile esotropia.

Secondly with myopic anisometropia the more myopic eye is used for near and the less myopic eye is used for the distance. On the other hand, patients with hypermetropic anisometropia always use the less hypermetropic eye and constantly suppress the more hypermetropic eye creating difficult amblyopia. Distortion amblyopia. This amblyopia occurred if the lentinal opacity fails to be cleared within 2-3 month of life.

How amblyopia is diagnosed?

Is not difficult to do if there is strabismus or ptosis and any obvious cataract. But it is not easy to recognize when there is anisometric and ametropic refractive error most of the time. A child may not be aware of having one good eye and another weak eye. There is often no way for parents to tell that something is wrong.

Goal of treatment

Three important points to remember to preserve, improve and restore vision.

To straighten the eyes if needed and to remove any obstacle to see clearly.

Management

Eye glasses - to correct refractive problems. Patching doing in the good eye to use the weak eye in order to use more to improve vision. Eye drops these may be used in some cases to improve the vision in the weaker eye when other methods can be applied. Drops are placed in the good eye in order to blur vision in that eye and thereby forcing the lazy eye to...
work more. Surgery-Is required to align the eye, remove the cataract or to fix the eye lid in normal height. Ametropic amblyopia usually takes place with hypermetropia of plus SD and above.

**Congenital cataract**
It is one of the common cause of amblyopia due to sensory deprivation. This can cause monocular or binocular pattern.

**Every child is different**
Each case of amblyopia management is different because every child's cause is a little different. Management would depend on child's age, underlying cause and density of amblyopia. It is also important to do the follow up with the doctor up to the age of 9 years, even if the child has regained vision after treatment. Vision might fall without maintenance treatment within the period of visual maturation.

**Timing to start management**
Every child need an eye exam with first 2 month of birth to confirm healthy red glow. Second examination should be done at one year of age and at the three years of age just before starting school. Strabismus most of the time never goes away by it self. It is always advisable to get an eye checked right away when parents first notice it.

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