Childhood Blindness

To those with blindness, blindness is a significant issue and a painful condition, which those with eyes cannot experience. In this context, it is important to remember that blindness can affect children.

Childhood blindness is an important contribution to the national prevalence of the disability of [blindness](https://en.wikipedia.org/wiki/Blindness).

Blindness in children generally means that the child cannot see an object 10 feet (about 3 meters) away, that another child could see if it was 200 feet (about 60 meters) away.

Children who are blind experience a lifetime of blindness which robs them of their opportunities.

Globally, the number children with blindness are approximately 1.4 million, representing 4% of the global blind population, and an additional 17.5 million are at risk of developing poor vision.

Although this number is significantly lower than the number of blind adults, the estimated economic and social burden of blindness for children is much greater due to the increase in blind years.

The current prevalence of blindness in children of India is known to be around 0.8/1000.

There are various difficulties associated with tackling CHB in India like diverse cultural practices and beliefs due to socioeconomic barriers.

Besides this, the major challenges faced are due to inequitable distribution of healthcare services, with most of the advanced eye care centres being located in the urban areas, and remote rural villages getting ignored.

Controlling childhood blindness is considered high priority.

Because, firstly, children who are born blind or who become blind and survive have a lifetime of blindness ahead of them, with all the associated emotional, social and economic costs to the child, the family, and society.

Indeed, the number of ‘‘blind years’’ due to all causes of blindness in children is almost equal to the number of ‘‘blind years’’ due to cataract in adults.

Secondly, many of the causes of blindness in children are either preventable or treatable.

Thirdly, many of the conditions associated with blindness in children are also causes of child mortality (e.g., premature birth, measles, congenital rubella syndrome, vitamin A deficiency, and meningitis). Control of blindness in children is, therefore, closely linked to child survival. Reducing visual loss in children poses particular challenges which are different from the challenges of controlling adult blindness.

Children are born with an immature visual system and, for normal visual development to occur, they need clear, focused images to be transmitted to the higher visual centres.

Failure of normal visual maturation (amblyopia) cannot be corrected in adult life, so there is a level of urgency about treating childhood eye disease which does not necessarily apply to adult conditions.

The assessment of vision and examination of the eyes also pose particular difficulties, which require time and experience on the part of the examiner.

Furthermore, children’s eyes cannot be considered as smaller versions of adult eyes, because they respond differently to medical and surgical treatment.

Having said that**,** there are many causes of blindness in children.

The common causes of childhood blindness includes refractive errors, ROP, Ophthalmia Neonatorium , trauma and developmental anomalies like microphthalmos, anophthalmos, coloboma. Routine screening by ophthalmologists is therefore essential to identify these conditions.

Government of India has taken a lot of measures in decreasing CHB.

This reflects a positive response to the action taken by the Ministry of Health and Family Welfare by successful implementation of various programs related to health care, immunization, and vitamin A supplementation which have made a positive impact by decreasing the burden of CHB.

This trend is supported by the evidence that there has been a significant reduction in vitamin A deficiency in India over the past two decades as indicated by reduction in prevalence of Bitot’s spots from 1.8% among preschool children in 1975 to 0.2% in 2012.

Similarly, the incidence of rubella related ocular morbidity has decreased though it requires a strict rubella vaccination coverage and coverage in teenage girls.

Besides blindness, the most important cause of Visual impairment in Indian children is refractive error.

The failure of correction of underlying refractive error is the most important contributory factor to VI in India.

Hence, diagnosis of refractive errors that can be corrected and timely correction of refractive error can lead to further prevention of amblyopia (Lazy eye)

This common cause of defective vision can be easily corrected with glasses. Parents and family should motivate children to wear glasses and also encourage outdoor activities and restricting screen usage.

Parents should also instruct the child to immediately notify them when the child has any difficulty in seeing things clearly

Eye health advice to children

1. Report to parents or teachers if there is blurring of vision or any other discomfort. An irritation in eye causes reflective rubbing of eyes which will aggravate the condition so it should be immediately reported
2. Limit everyday screen time by making new friends or playing under sun. Keep a good distance from screen and also make sure that the room is lit properly while watching TV. Do not use electronic gadgets before bed. Remember that our eyes also require rest and proper sleep is mandatory
3. Report any injury or irritation following some chemical exposure to eyes immediately.
4. Avoid playing with sharp and hard toys. Eye protection can be encouraged while playing.
5. Always wash our hands after coming from school, play
6. Avoid junk food and make it a habit to eat healthy food
7. Do not hesitate for routine eye check up. Always use the glasses prescribed which will prevent other ocular discomfort and progression of the disease per say
8. Always make sure while reading the room is adequately lit , books are kept at distance of 25cm from eye with light falling on the book from behind

**Future interventions and strategies related to improve blindness**

 The control of blindness in children, especially in India requires well designed and functional integrated healthcare delivery system for both screening and referral services, has to be tailored for both geographical accessibility and socio cultural acceptance.

 A major recommendation to combat CHB would be effective referrals to eye surgeons and especially paediatric ophthalmologists.

Follow up camp and preschool camps should be encouraged.

Periodic and proper training of both ophthalmologist and optometrist in field of paediatric ophthalmology & refraction is necessary.

**Conclusion**

 Having said about the importance of recognising important conditions that can lead to CHB, prompt management of the same is vital.

 To tackle with the current causes of ocular morbidity due to whole globe and retinal abnormalities, a careful genetic counselling of parents before child birth, especially in the cases of consanguineous marriage, and teleophthalmology to diagnose the preventable and potentially blinding diseases like ROP should be emphasized to prevent these children from becoming blind in future years.

 Although with the availability of proper healthcare facilities, the trend of childhood blindness is changing for the causes but still a lot of effort in the form of timely neonatal eye care facilities, paediatric surgical services and proper refraction strategies is required.