

Commentary: Understanding irreversible blindness - The need of the hour; Reversing it - The need of the future!

Irreversible blindness: What do we understand by it? It simply means that one cannot get back the original vision or near-normal vision or some useful or ambulatory vision after the intervention, be it medical or surgical. There are various factors influencing irreversible blindness: Geographical area, age, socioeconomic status, education status, developed or developing country, and unilateral or bilateral involvement. Glaucoma, diabetic retinopathy, and age-related macular degeneration are the leading causes of irreversible blindness in the world.^[1-3] However, the various causes of vision loss may be similar or may differ significantly in the developed and developing countries.^[2] The difference could be probably because of early diagnosis and treatment, availability of better treatment options, and better awareness among people to reach out for medical help in the developed countries.

In developing countries, on the other hand, it is important first to acquire the data on prevalence and causes of irreversible blindness based on geographical area and also to note the financial status and available infrastructure of that area. This will help us in better planning of public health and allocating resources.^[2]

The article "Etiological Spectrum of Irreversible Blindness in Kashmir in North India,"^[4] has brought out well the importance of screening in rural areas for the various causes of irreversible blindness and the importance of preventing the same.

The way to tackle irreversible blindness are as follows: To conduct awareness programs in the community, based on the cause or causes that are prevalent in that geographical area; conduct screening programs for specific eye disease; and early detection and instituting appropriate treatment and

most importantly advocating regular follow up. "Prevention is better than cure" - therefore screening of family members is yet another important way to prevent blindness.

What does the future behold? Can we cure the irreversible blindness?

Gene therapy in glaucomatous eyes can help in correcting the biochemical abnormalities that lead to retinal cell death.^[5] Stem cell transplantation to generate new retinal pigment epithelial cells is yet another promising way to treat degenerative conditions.^[6] Neuroprotection prevents cell death and vision loss irrespective of the underlying cause. Stem cell transplantation is useful for both neuroprotection and replacement of retinal ganglion cells in glaucoma.^[7] Definitely, there is a ray of hope as regards to irreversible blindness.

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