



Wear a Helmet, Prevent the Problem, Save Vision

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A Public Awareness Drive on Vascular Complications of Road Traffic Accident

Awareness is fundamental in every sphere of life.

Many campaigns strive to increase the awareness in general public about matters that can impact human lives. One such campaign I fondly recollect is “*Piyo glassful doodh*”.¹ The founder of the National Dairy Development Board (Gujarat) Verghese Kurien promoted drinking milk over soft drinks. The ad campaign began in 1996; its catchy tune left an indelible mark and conveyed the message very well.

The most well-known medical campaign is the one on “Eye Donation.” In India, there are approximately 6.8 million people suffering from corneal blindness.^{2,3} This issue has been addressed comprehensively by the Government of India through the National Program for Control of Blindness. Overcoming various barriers in eye donation, the program eventually succeeded in making eye donation a norm.

The field of interventional radiology is fairly well established over the last few decades and has impacted lives of patients and families in unimaginable ways.

While the medical community is aware of treatment options for a given entity, the public also needs to be made aware of these. This has been done so far by sharing knowledge via print media (newspapers mainly), radio, TV, etc. The advent of Internet and social media in the last decade has massively increased the public outreach.

Working in a tertiary referral center as an interventional neuroradiologist, one of the conditions I often treat is the carotid cavernous fistula (CCF). A CCF is an abnormal connection between the internal carotid and/or external carotid artery and the cavernous sinus. Barrow classified it into four

types, type A being a direct connection usually secondary to trauma.⁴ Rupture of cavernous aneurysm and connective tissue disorders can also result in a direct CCF at times.

When CCF happens immediately after trauma, the association is obvious. The hemodynamic changes in CCF result in raised intraocular pressure and put the patient's vision at risk. But at times the injury to internal carotid artery is relatively subtle, the rent is small, and the fistula thus causes minimal hemodynamic changes. The redness in eyes is minimal, and proptosis may not be there. These cases are at times mistaken for local infection/thyroid disease and missed—as we have all known.

In developing countries, a large population drives two wheelers and road traffic accidents are commonplace. The Government of India issues regular guidelines about road safety including those for helmet use. When a rider driving without a helmet meets with an accident, he/she may sustain head injury, spinal injury, abdominal injury, and so forth.

Several awareness campaigns have made the public aware of head injury, its prevention, and possible ways to help/provide timely treatment.

But what the public is not aware is that trauma may also cause vascular problems. In the craniocervical region, these problems can include the CCF, arterial dissections, and arteriovenous fistulas.

Most of the young patients who presented to our institute with a posttraumatic CCF admitted that they were driving without a helmet. During the counselling of one such patient, we decided to make a video to raise public awareness.

To spread the word wider, we approached the city's Commissioner of Police & Joint Commissioner (Traffic), both of whom extended their wholehearted support to collaborate for this work.

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With a team of professionals from the film industry, young students, and few of my colleagues, all dedicated to a social cause, a video was created to address the issue.

The video was released for public on February 26, 2021 jointly by the Director of our institute and the Joint Commissioner of Police (Traffic) Bangalore. The Bangalore Traffic police has shared the video on its twitter handle: @blrcity-traffic and was uploaded on National Institute of Mental Health & Neurosciences (NIMHANS) Web site. The video can be presently accessed at these links: <https://youtu.be/toQnq-AUJo> (English version), <https://youtu.be/HqHQAg3-JAF8> (Kannada version). The impact of awareness is put forth in the following anecdote.

A young male patient with visual loss was referred to our department to seek treatment for intracranial dural arteriovenous fistula. While counselling the patient's family we mentioned about the visual loss. His young cousin immediately asked—Madam, can he see if someone donates eyes?

The awareness of eye donation to bring back vision has undoubtedly taken deep roots.

We, the medical community, continuously strive to raise the awareness for our work in ways that the general public understands the central idea. We must guide them to possible options for a good outcome. In the coming days, sharing

information will change for good, in ways we might have never anticipated.

Raising awareness is the first step, acceptance follows in due course.

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