

## CASE REPORT

**Occupational Hazard: Sudden Loss Of Vision In A Vulcanizer**

Ubah J. N and Adeoti C. O.

Department of Ophthalmology, College of Health Sciences, Ladoke Akintola University of Technology, Osogbo, Osun State, Nigeria

Correspondence to: email: ubahj2002@yahoo.com

Telephone; 08035764310

**Abstract**

*This is a case report of a 55-year old vulcanizer who became blind following an ocular injury he sustained while at work. Incidentally, he had been blind in the fellow eye from childhood. Prior to this last injury, he claimed he had good vision in the affected eye, and was able to carry on his daily activities.*

*The case illustrates the significance of choice of occupation, the need to protect an only eye, and use of appropriate protective devices.*

**Introduction**

Occupation related eye injuries have been reported by many writers<sup>1, 2, 3</sup>. These could be blunt or perforating, mild or severe. Open globe injuries tend to have a poor visual outcome<sup>1,3</sup>.

Blunt trauma to the eye could end up with an open globe if the impact is severe enough. There is usually sudden rise in intraocular pressure which may be enough to give full thickness break in the cornea and/or sclera.

All over the world, people engage in different types of labour to cater for their daily needs. Often, however in developing countries, precautionary measures are not taken to prevent occupational hazards which could involve the eye.

For someone blind from birth, the psychological impact of the blindness is not so much compared to one who becomes blind after enjoying good vision for years, while still active. It is even worse for a breadwinner.

This is a case of blindness of sudden onset in a middle aged vulcanizer who sustained severe open globe injury while at work. Unfortunately, he had been blind in the fellow eye since childhood.

**Case Report**

Mr. X. was a 55 - year old man, a vulcanizer by occupation, who presented at the eye clinic of Ladoke Akintola University of Technology

Teaching Hospital in Osun State, Nigeria with a 5 - day history of loss of vision in the left eye following an injury while at work.

He was apparently seeing well with the left eye until five days prior to presentation. While pumping a lorry tyre, a large metallic ring from the tyre flew up and hit him in the left eye and fell off intact. Immediately he had pains, bled from the eye and lost his vision.

He was rushed to a private hospital where he was given some first aid treatment including injections like tetanus toxoid and eye preparations - names not known and was subsequently referred to the teaching hospital. Unfortunately he had been blind in the right eye since childhood following a hot water injury.

There was no history of systemic disease known to the patient but he had a systemic blood pressure of 150/110mmHg.

Ocular examination, showed no light perception in both eyes. The right eye was phthisical, with pseudoptosis. The left eye showed moderate lid edema and healing laceration on the lateral aspect of the eye brow, measuring about 2cm in length.

The conjunctiva was moderately chemosed and hyperaemic. There was a horizontal ragged laceration of the cornea extending from 3 to 9 o'clock positions. A piece of uveal tissue was seen hanging out from the 3 o'clock end. The whole cornea was hazy, and there was full hyphaema. It was difficult to visualise the structures beyond the anterior chamber. He was started on frequent drops of topical antibiotics and prepared for surgery while the cardiologist controlled his blood pressure. He was taken to theatre on the 4<sup>th</sup> day for wound exploration and repair.

Findings at surgery included full thickness horizontal corneal laceration, full thickness scleral laceration extending to 1.5cm and 1.6cm from 3 and 6 o'clock positions respectively. There was incarcerated uveal tissue the whole length of the wound and a piece of it was hanging out. It came off

easily while cleaning the wound. The wound was apparently clean. The laceration was repaired successfully with 8/0 virgin nylon suture. While repairing the scleral tear which extended to the attachment of the extraocular muscles, only dark coloured fluid was seen oozing out, vitreous was not encountered.

By the 7<sup>th</sup> day post operatively, the visual assessment still showed no light perception. The cornea was still very hazy with no view of structures behind. He was discharged home on drops of Chloramphenicol, Dexamethasone and Atropine 1%, to be followed up in the out patient department of the hospital but he never showed up afterwards.

**DISCUSSION**

Eye injuries are common and constitute 10%<sup>3</sup> and 22%<sup>4</sup> of work related injuries. They are also largely preventable<sup>2,4,5,6</sup>.

The usefulness of good vision for human survival cannot be over emphasised. It is necessary for relative independence of man.

Our patient happens to be a victim of occupation related ocular injury.

The impact of the ring on the globe was so severe that devastating open globe injury resulted. Visual acuity of no light perception and the findings at surgery amounted to poor prognosis. There could have been extrusion of the intraocular contents considering the extent of the scleral lacerations, and the fact that vitreous was not seen.

The patient in question was on this job with monocular vision for 24 years before the injury, The ocular status prior to injury was enough indication for securing a safer job with less risk to the eye. He admitted not making use of any form of protective device; apparently he was not aware of the need for such. None of his counterparts made use of any and he was able to carry on for so many years successfully; He was also self employed. This could have been a readily available job in a society where survival of the fittest is the norm.

The patient also happened to be the sole family bread winner; the more reason why the incident has placed his family at a tight financial end. The psychological morbidity and problems of daily living in people with visual handicap is enormous<sup>7</sup>.

Work related eye injuries can be devastating. There is need for public campaign and education on preventive strategies. Those with monocular vision in particular need to be careful in their choice of jobs

to avoid injury to the other eye.

Those who engage in jobs where the eyes are at risk, for example, exposure to very bright light and chemicals as in panel beating works, or direct handling of metals like vulcanizing are advised to always make use of protective eye wear. This will reduce the potential risk of severe eye injuries and its sequelae.

**REFERENCES**

1. Vasu U., Vasnaik A., Battu R.R., Kurian M., et al. Occupational open globe injuries. Indian J Ophthalmol, 2001; 49(1): 43-7.
2. Fong L.P., Taouk Y. The role of eye protection in work related eye injuries. Aust NZJ Ophthalmol, 1995. 23(2): 101-6.
3. Alfaro D.V. 3<sup>rd</sup>, Jablon E.P., Rodriguez Fontal M., et al. Fishing related ocular trauma. Am J Ophthalmol. 2002; 139(3): 488-92.
4. Dannenberg A.L., Parver L.M., Brechner R.J., et al. Penetrating eye injuries in the workplace. The National Eye Trauma System Registry. Arch Ophthalmol. 1992; 110(6):843-8.
5. Framme C., Roider, J. Epidemiology of open globe injuries. Klin Monatsbl Augenheilkd. 1999; 215(5): 287-93.
6. Patel B.C., Morgan L.H. Work-related penetrating eye injuries. Acta Ophthalmol (Copenh). 1991; 69(3): 377-81.