

Factors influencing the final visual outcome in open globe injuries

Dear Editor,

We read with interest the article "Descriptive study on ocular survival, visual outcome and prognostic factors in open globe injuries" by Rao *et al.*^[1] We congratulate the authors for their study and wish to make a few comments:

1. The authors stated that "afferent pupillary defect (APD) in one eye with no perception of light was eviscerated and one eye with foreign body also underwent evisceration." In addition to these two eyes, two eyes of endophthalmitis progressed into panophthalmitis and were finally eviscerated. Therefore, it looks that total four eyes underwent evisceration. Moreover six eyes developed phthisis during the study period. The authors mentioned that the ocular survival rate was 97% which looks like a misinterpretation of data. The authors did not perform vitrectomy for endophthalmitis in any eye. Early vitrectomy is also a positive prognostic factor in traumatic endophthalmitis secondary to open globe injury.^[2]
2. The authors have not mentioned about data pertaining to time since injury. However, they mentioned that time since injury was found to be insignificant for assessing the prognosis. The authors mentioned that retinal detachment and vitreous hemorrhage were significant predictors of visual outcome but they have not mentioned about how many cases underwent retinal reattachment surgery or vitrectomy. This should be clarified.^[2]
3. The authors have mentioned that cataract was found to be insignificant for assessing the prognosis. However, they have not mentioned about the nature and extent of the lenticular damage. Damage to the anterior capsule only did not produce any significant impact on the final visual outcome but extensive damage of the posterior capsule, zonular dehiscence, and traumatic dislocation of the lens into the vitreous cavity or subconjunctival space definitely produced a negative impact on final visual acuity.^[3]
4. The authors have mentioned that intraocular foreign bodies (IOFBs) have no impact on visual prognosis. We feel that it was probably because all IOFBs were in the vitreous cavity only and did not have any associated retinal damage. Natures of IOFBs, location of IOFBs, and associated retinal damage have a significant impact on visual prognosis. Non-metallic IOFBs and non-inert metallic IOFBs have worse visual prognosis than inert IOFBs. An IOFB embedded near the fovea has the worse visual prognosis in comparison to peripherally located intraretinal IOFB.^[4]
5. The status of APD also has a prognostic value. However, the authors did not evaluate this arm of study. Relative APD is an indirect clue of significant posterior segment or neuro-ophthalmic trauma. An APD is one of the variables used to calculate the ocular trauma score.^[5] The ocular trauma score provides the expected visual outcome by 6 months after ocular injury. The authors also mentioned that the zone of injury determined the prognosis but they have not mentioned which zone has best visual prognosis. Zone 1 (cornea and limbus) has the best prognosis and zone 3 worst. However, in zone 1, there are intrazone variations. Patients having full thickness non-self-sealing corneal wounds involving pupillary area have poor visual outcome after primary repair and require subsequent optical penetrating keratoplasty.^[6]

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References

1. Rao LG, Ninan A, Rao KA. Descriptive study on ocular survival, visual outcome and prognostic factors in open globe injuries. *Indian J Ophthalmol* 2010;58:321-3.
2. Coleman DJ. Early vitrectomy in the management of the severely traumatized eye. *Am J Ophthalmol* 1982;93:543-51.
3. Mester V, Lens KF. In: Kuhn F, editor. *Ocular trauma: Principles and practice*. 1st ed. New York: Thieme publisher; 2002. p. 180-96.
4. Punnonen E, Laatikainen L. Prognosis of perforating eye injuries with intraocular foreign bodies. *Acta Ophthalmol (Copenh)* 1989;67:483-91.
5. Unver YB, Kapran Z, Acar N, Altan T. Ocular trauma score in open-globe injuries. *J Trauma* 2009;66:1030-2.
6. Lee CH, Lee L, Kao LY, Lin KK, Yang ML. Prognostic indicators of open globe injuries in children. *Am J Emerg Med* 2009;27:530-5.

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