

EMERGENCY PRESENTATIONS OF OPEN GLOBE INJURIES: A 10-YEAR REVIEW

Purpose: To describe the characteristics, management, and visual outcomes of patients presenting with open globe injuries.

Method: A retrospective consecutive case review of patients presenting with open globe injuries to one eye emergency department over a 10-year period from 2005 to 2015 was conducted. Data collected included demographics, examination findings, investigations, management, visual outcomes and complications.

Results: A total of 656 were included in the study (79.9% male, average age 39.3 years; 20.1% female, average age 56.4 years), with 68.3% penetrating. The most common mechanism of injury was construction activities with tools (33.4%), and most occurred at home and in the workplace (28.4%, 24.5%). Preoperative CT scans were performed for 47.7% of patients, and majority were administered preoperative antibiotics (76.2%), and tetanus (78.0%). Surgical repair was required for 94.1% of patients with the median time to theatre of under 4 hours. Complications included; elevated intraocular pressure (19.4%); wound leak (16.2%); retinal detachment (15.4%); enucleation/evisceration (5.3%); endophthalmitis (4.1%). Final visual acuity tended to improve compared to initial presentation, notably an increase of 21.0% of those with \leq 6/6 vision. However visual loss can be profound, with 34.7% of patients obtaining a final vision \geq 6/60.

Conclusion: Open globe injuries can result in significant morbidity, therefore public health prevention strategies are important. Emphasis on wearing suitable eye protection at home and the workplace as well as improving safety guidelines is vital. Improving initial management may improve outcomes.