lated as follows: 70 for the VA of PL, -23 for globe rupture, -11 for retinal detachment and -10 for RAPD, giving a total raw score of 26 and OTS of 1, which is associated with a 90% predicted outcome of between NPL and PL vision (i.e., 73% for NPL plus 17% for PL) and only a 3% chance of vision better then 6/60. She underwent a vitrectomy and cryopexy procedure with silicone oil internal tamponade. Following this treatment, her final VA in the affected eye was 6/24 – unexpectedly useful vision. However, the initial score had been useful in preoperative counselling of the patient and it reinforced the guarded prognosis of the operation, even though the eventual outcome was good. In resource-limited settings this predictor may mean better management of expectations, or result in the development of appropriate referral systems for trauma.

There are drawbacks to using such a simplified system. It does not include associated injuries that have a bearing on the outcome of the mechanical injury, such as chemical, electrical, and thermal ocular injuries, nor does it include significant facial and ocular adnexal injuries. It does not factor in results from ancillary tests including X-ray, computed tomography, or ultrasound 'B' scans that inform the examination of the eye, especially where there is no view of the posterior segment. The clinician must interpret these other clinical and investigational findings to help refine the prognosis predicted by the OTS.[3]

Additional uses of the OTS

Perhaps the greatest benefit of the OTS is its use as a reference point when auditing surgical results of cases due to mechanical trauma. It can provide useful pointers to guide service redesign in order to maximise outcomes. When managing ocular trauma sustained during the Afghanistan and Iraq wars, it became apparent that improved surgical provision and techniques were not improving outcomes from the worst injuries and that the worst injuries were shrapnel injuries. To counter this, the enforced use of combat eye protection reduced the incidence and severity of eye injuries significantly. In this case, the OTS was used to highlight the problem to policy makers in an irrefutable form to which they responded.[4]

Overall, it remains a useful system that allows communication between clinicians of different grades, specialties and nationalities, enabling them to efficiently plan, manage and monitor the full range of ocular injuries due to mechanical trauma.

In your setting, there may be other methods that are used to guide clinicians. You can share these on the *Community Eye Health Journal* Facebook page.

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Further reading

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Implementing and applying the Ocular Trauma Score: the challenges

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Ocular trauma is a significant cause of unilateral blindness in the Caribbean in both adults and children.[1,2,3] In Trinidad and Tobago, blunt ocular injury will typically account for around a third of all referrals from the Accident and Emergency department to the ophthalmology unit.[4]

The Ocular Trauma Score (OTS) aims to estimate a patient's visual acuity six months after an eye injury. A higher OTS score indicates a better visual prognosis.

The OTS was introduced at the Eric Williams Medical Sciences Complex, the main teaching hospital of the University of the West Indies, in 2012. The elements used to calculate the OTS (visual acuity, rupture, endophthalmitis, perforating injury, retinal detachment, relative afferent pupillary defect [RAPD]), were already routinely recorded during initial assessment of ocular trauma patients at the unit. It was expected that this would make the OTS easy to implement.

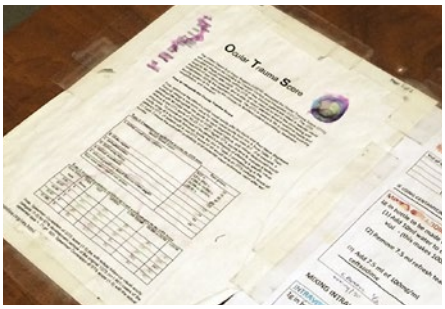
The OTS was first discussed during a postgraduate teaching session on ocular trauma. It was decided that the first on-call officer would calculate the score following initial assessment in the doctors' on-call examination room. A copy of the OTS was prominently displayed on the desk used for writing the notes, serving as a reminder to use it. It was decided that the score would be part of the presentation to the consultant on call and would be used to inform management decisions and discussion with the patients and their families.

Unfortunately, the use of the OTS was not sustained in the long term. Initially, there was inconsistent use of the OTS by the different ophthalmology trainees; the consultants also did not request the OTS score when the trainees presented each case to them. Then, when there was a change of staff at the junior and senior levels, its use was discontinued.

Lessons learnt

Critical analysis of the OTS in an academic classroom environment (during the postgraduate teaching session), and displaying the OTS score prominently in examination rooms, helped to make clinicians aware of it and encouraged them to use it in their consultations with patients. However, this was not enough. The OTS should be implemented as unit policy and incorporated in all protocols and treatment guidelines in order to ensure its continued use. Capturing eye trauma patients' OTS scores for auditing purposes and analysing these data regularly will also help to demonstrate its usefulness.

It is worth the effort. The simplicity of the OTS allows medical and nursing staff with varying levels of experience to have a common understanding of prognosis. It is also an appropriate aid for counselling as it helps patients to understand their visual prognosis, which reduces unrealistic expectations. However, it is not a replacement for good clinical judgement – and the score is only applicable if all efforts are made to provide the correct management of the injury.



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A copy of ocular trauma score was prominently displayed. WEST INDIES

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