

References

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Sir,

Comment on a new ocular trauma score in pediatric penetrating eye injuries

We read with interest Acar *et al*'s¹ article on their newly proposed paediatric penetrating ocular trauma score (POTS). The authors have designed POTS to be used specifically in paediatric penetrating injuries to prognosticate for future visual acuity (VA) rather than using the more widely recognised but non-specific ocular trauma score (OTS) designed by Kuhn *et al*² as part of the United States Eye Injury Registry.

We appreciate that the authors felt that the age of the patient and location of the wound were important prognostic factors and so included them in the scoring system. The authors decided to downscale the amount of points scored for initial VA due to problems that were inherently present when trying to obtain an accurate VA in children, especially those with a significant injury. They identified that the POTS was statistically significant in predicting final VA.

As the article stands, the authors have not demonstrated any reasons why POTS should be used instead of OTS for paediatric penetrating injuries. VA still needs to be obtained to enter into the POTS system. We therefore suggest two ways in which POTS could be more rigorously tested to demonstrate any benefit.

First, the POTS could be calculated without using the VA score. As the authors pointed out, the relationship between initial VA and final VA is statistically significant. It would be interesting to see whether POTS without any VA inclusion gives a statistically significant result or whether it is purely the initial VA prognostic factor that makes POTS statistically significant in predicting final VA. Second, the authors could apply the OTS to their data and compare the two scores directly to identify any benefit of one over the other.

Unless a clear benefit of POTS over OTS can be demonstrated, there would be no reason to use POTS preferentially. As the authors demonstrated in their study, VA can usually be obtained in all but the very youngest children, and so it may be that VA is the most important factor and can be used as a stand-alone predictor of final VA.

Conflict of interest

The authors declare no conflict of interest.

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Sir,

Response to Sharma *et al*

We thank Sharma *et al*¹ for their comments regarding our paper.² Ocular trauma score (OTS) is an important systematic in the prediction of final visual acuity (VA) after trauma. However, it is a heterogeneous classification. In OTS, all classification systematics are based on initial VA. Moreover, scoring and classification are the same in all age groups. Another challenge is the accurate determination of initial VA, which is the cornerstone of OTS classification. Since in the open-glob injuries the evaluation of relative afferent pupillary defect is mostly impossible, the comparison of OTS and POTS is irrational.

The main aim of the development of pediatric OTS (POTS) was to determine a new scoring system without using initial VA. The age of the patient is important as the proliferative changes are more intense in the pediatric group and an amblyopia risk exists. Additionally, the dynamics of wound healing are different from those of adults. Taking into account the amblyogenic effect of the trauma-related damage and the visual immaturity of the pediatric eye, we propose modification in the much appreciated and widely used OTS by adding the age of the child in the scoring system.

As zone 3 injuries have worse prognosis and coexistent pathologies have a statistically significant effect on the determination of prognosis in the other reported studies, localization of the wound and coexistent pathologies were included in the classification proposed by our team.