



## Diplopia in orbital blow-out fractures: 10-year retrospective study

Faaiz Alhamdani, Justin Durham, Mark Greenwood, Ian Corbett

**Objective:** To investigate diplopia (binocular single vision [BSV] test) characteristics in blow-out fractures of the orbit and its value in fracture management.

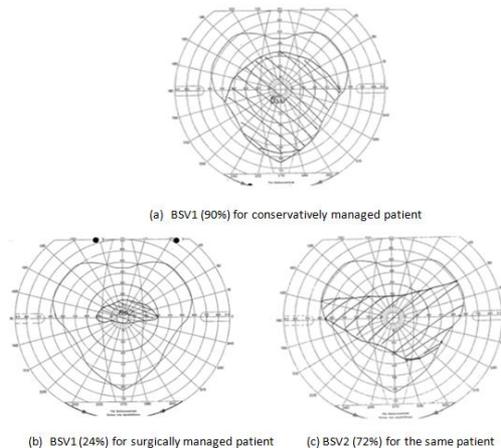


Figure 1

**Material and methods:** Patients with isolated blow-out fractures treated from 2000 to 2010 were included. BSV scores were stratified into three categories: low BSV category (0-60); moderate BSV category (61-80), and high BSV category (81-100).

**Results:** A total of 183 patients (106 surgically and 77 conservatively managed) met the inclusion criteria. There was no significant improvement in BSV postoperatively in surgically managed patients with preoperatively high BSV, whereas there was significant improvement ( $p < 0.05$ ) for the high BSV category (Figure 1 and 2) in the conservative group. Preoperative BSV was found to be significantly related ( $p < 0.05$ ) to postoperative BSV, subjective diplopia outcome, follow-up time, and number of follow-up visits. Surgical timing, approach, and choice of implant material were not found to be statistically related to final diplopia outcome, follow-up time, or number of follow-up visits.

**Conclusions:** BSV is useful management criterion for management. On the basis of this study, surgical intervention would not be recommended for blow-out fracture cases with BSV score  $>80\%$  for correction of diplopia alone.

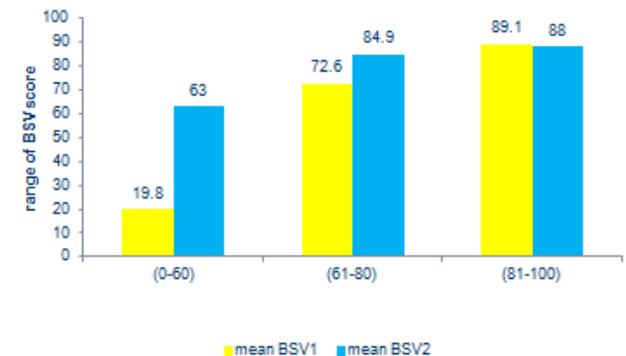


Figure 2