

# Spinal cord perfusion

Increased [spinal cord perfusion](#) and blood pressure goals have been recommended for [spinal cord injury](#) (SCI). Penetrating SCI is associated with poor prognosis, but there is a paucity of literature examining the role of vasopressor administration for the maintenance of mean arterial pressure (MAP) goals in this patient population.

To elucidate this topic and to determine the efficacy of vasopressor administration in penetrating SCI by examining a case series of consecutive penetrating SCIs. **METHODS:** We reviewed consecutive patients with complete penetrating SCI who met inclusion and exclusion criteria, including the administration of vasopressors to maintain MAP goals. We identified 14 patients with complete penetrating SCIs with an admission American Spinal Injury Association grade of A from 2005 to 2011. The neurological recovery, complications, interventions, and vasopressor administration strategies were reviewed and compared with those of a cohort with complete blunt SCI. **RESULTS:** In our patient population, only 1 patient with penetrating SCI (7.1%) experienced neurological recovery, as determined by improvement in the American Spinal Injury Association grade, despite the administration of vasopressors for supraphysiological MAP goals for an average of  $101.07 \pm 34.96$  hours. Furthermore, 71.43% of patients with penetrating SCI treated with vasopressors experienced associated cardiogenic complications. **CONCLUSION:** Given the decreased likelihood of neurological improvement in penetrating injuries, it may be important to re-examine intervention strategies in this population. Specifically, the use of vasopressors, in particular dopamine, with their associated complications is more likely to cause complications than to result in neurological improvement. Our experience shows that patients with acute penetrating SCI are unlikely to recover, despite aggressive cardiopulmonary management.

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