

Penetrating Spinal Cord Injury

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.

Readdy et al reviewed consecutive patients with complete penetrating SCI who met inclusion and exclusion criteria, including the administration of vasopressors to maintain MAP goals.

They 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.

In the 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 ± 34.96 hours. Furthermore, 71.43% of patients with penetrating SCI treated with vasopressors experienced associated cardiogenic complications.

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. This experience shows that patients with acute penetrating SCI are unlikely to recover, despite aggressive cardiopulmonary management ¹⁾.

1)

Readdy WJ, Saigal R, Whetstone WD, Mefford A, Ferguson AR, Talbott JF, Inoue T, Bresnahan JC, Beattie MS, Pan J, Manley GT, Dhall SS. Failure of Mean Arterial Pressure Goals to Improve Outcomes Following Penetrating Spinal Cord Injury. *Neurosurgery*. 2016 May 3. [Epub ahead of print] PubMed PMID: 27145343.

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Last update: **2024/06/07 02:50**

