

Neurologic Evaluation and Management of Perioperative Nerve Injury: Erratum

In the article “Neurologic Evaluation and Management of Perioperative Nerve Injury” appearing on page 491 of the September-October 2015 issue, Table 8, Summary Recommendations–Treatment, the fifth bullet point should be corrected to read:

- The role of corticosteroids in anesthesia-related injuries is unknown. Corticosteroids may have a beneficial effect after direct spinal cord trauma, and possibly trauma resulting from interventional procedures. However, the potential benefits for these patients should be balanced against the associated risk of corticosteroid-associated hyperglycemia, i.e., hyperglycemia worsens brain (and presumably, spinal cord) ischemic injury. We do not recommend the use of corticosteroids for ischemic spinal cord injury. Definitive diagnosis and treatment are best determined in consultation with neurology or neurosurgery colleagues. (Class III).

In addition, the first paragraph in the section Role of Other Interventions in the Setting of Neuraxial Injury should conclude with the additional sentences shown here in italics.

Corticosteroids are frequently used in the setting of acute traumatic SCI. A Cochrane review concluded that methylprednisolone given at a dosage of 30 mg/kg over 15 minutes within eight hours of the injury, with a maintenance infusion of 5.4 mg/kg/hr for an additional 23 hours (or a total of 48 hours if the bolus was greater than three hours after the injury) improved motor outcomes up to 1 year postinjury.^{64–66} While this is commonly practiced, others question the validity of the results or that it has a benign side-effect profile and thus conclude that the evidence is insufficient to recommend as a standard guideline.^{67–70} Neuraxial anesthetic complications are too rare to study the role of corticosteroids systematically. Steroids are commonly given intraoperatively empirically in the setting of presumed neurologic injury with variable dosing, but the role in neuraxial anesthetic complications is unknown. The reported role of steroids in traumatic SCI has only been shown to be effective in the acute phase (within 8 hours of the injury), but when related to an anesthetic complication, the diagnosis of a cord injury is sometimes delayed postoperatively. Finally, the risk profile of steroids in the postoperative period is unknown and is likely higher than in the posttraumatic setting in terms of infection risk and a potential adverse effect on wound healing. Although the role of corticosteroids in postsurgical neuraxial complications is unknown, it is widely used in other causes of SCI and could be considered if the associated risks are acceptable. *In contradistinction, hyperglycemia worsens brain (and, presumably, spinal cord) ischemic injury and therefore corticosteroids should probably be avoided in the setting of presumed spinal cord ischemia (such as anterior spinal artery syndrome). Definitive treatment is best determined in consultation with neurology or neurosurgery colleagues.*

REFERENCE

1. Watson JC, Huntoon MA. Neurologic evaluation and management of perioperative nerve injury. *Reg Anesth Pain Med.* 2015;40:491–501.