

Author Year Country Research Design PEDro Sample Size	Methods	Outcomes
<b>Cethrin®</b>		
<p><a href="#">Fehlings et al.</a> 2011 Canada Prospective Controlled Trial N<sub>initial</sub>=48, N<sub>final</sub>=35</p>	<p><b>Population:</b> Age range=16-70 yr; Gender: male=84%, female=16%; Level of injury: cervical-thoracic; Severity of injury: complete=100%, incomplete=0%, AIS A. <b>Treatment:</b> Patients received 1 of 5 doses of Cethrin®: 0.3 mg, 1 mg, 3 mg, 6 mg, and 9 mg at the time of spinal surgery. <b>Outcome Measures:</b> The following during hospital stay: drug safety and tolerability, drug pharmacokinetics. The following after 1 year: neurological recovery using AIS, ASIA motor function. <b>Chronicity:</b> Individuals underwent spinal surgery within 7 days of sustaining injury.</p>	<ol style="list-style-type: none"> <li>1. The authors conclude that Cethrin® is a safe and tolerable drug.</li> <li>2. The authors note there were no serious adverse effects related to the drug.</li> <li>3. Cethrin® exhibited little systemic exposure in patients.</li> <li>4. There was a large preliminary effect in ASIA motor scores with the most improvement seen in patients with cervical injuries who received 1 mg and 3 mg of Cethrin®*.</li> <li>5. There were very few improvements in sensory scores in patients who received varying doses of Cethrin®*.</li> <li>6. After one year, 31% of cervical injured patients and 6.3% of thoracic injured patients recovered at least 2 steps on the AIS.</li> </ol> <p>*There were no statistical analyses performed.</p>
<b>Minocycline</b>		
<p><a href="#">Casha et al.</a> 2012 Canada RCT PEDro=6 N<sub>initial</sub>=52, N<sub>final</sub>=44</p>	<p><b>Population:</b> Mean age=37 yr; Gender: male=77%, female=23%; Level of injury: cervical-thoracic; Severity of injury: complete=69%, incomplete=31%, AIS A-D. <b>Treatment:</b> Patients were randomly assigned to receive either minocycline or a placebo with a subclavian central venous catheter for 7 days within 12 hr of injury. The first five patients received 200 mg twice daily (low dose), whereas all patients after that received an 800 mg loading dose and 400 mg twice daily (high dose). <b>Outcome Measures:</b> The following during hospital stay and after the patient plateaued in motor function (i.e. 3-12 months post SCI): ASIA motor function, ASIA sensory function, functional recovery using Functional Independence Measure (FIM), Spinal Cord Independence Measure, the London Handicap Scale and Short Form 36 questionnaire, and adverse events. <b>Chronicity:</b> Individuals studied were within 12 hr of sustaining injury.</p>	<p><b>Initial Analysis</b></p> <ol style="list-style-type: none"> <li>1. After three months, there were no significant differences in motor function between patients who received minocycline and those who received placebo (p=0.20). The most improvement was seen in patients with cervical injuries (p=0.05), whereas no significant improvement was seen among patients with thoracic injuries (p=0.20).</li> <li>2. There were no significant differences in pinprick (p=0.15) or light touch (p=0.27) scores between patients who received minocycline and those who received placebo.</li> <li>3. There were no significant differences in any functional recovery measure between patients who received minocycline and patients who received placebo (p&gt;0.05).</li> <li>4. Adverse events did not vary significantly among the placebo, low dose, or high dose minocycline groups (p&gt;0.05).</li> </ol>
<b>Riluzole</b>		
<p><a href="#">Grossman et al.</a> 2014 USA Cohort N<sub>initial</sub>=36, N<sub>final</sub>=35</p>	<p><b>Population:</b> Age range=18-69 yr; Gender: male=83%, female=17%; Level of injury: cervical-thoracic; Severity of injury: complete=53%, incomplete=47%, AIS A-C.</p>	<ol style="list-style-type: none"> <li>1. The plasma concentration and systemic exposure to riluzole varied significantly among patients (p&lt;0.05).</li> </ol>

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	<p><b>Treatment:</b> Patients were administered riluzole (50g twice daily within 12 hr of injury for 7 days). Patients were compared to others in the North American Clinical Trials Network SCI Registry who did not receive riluzole. 39% of patients in riluzole group and 58% of patients in registry group received corticosteroids according to hospital protocol.</p> <p><b>Outcome Measures:</b> The following during hospital stay and 90 days and 180 days after injury: the pharmacokinetics of the drug, adverse event outcomes, ASIA motor function, ASIA sensory function, neurological recovery based on AIS, functional recovery using Spinal Cord Independence Measure (SCIM).</p> <p><b>Chronicity:</b> Individuals were screened and enrolled in the study within 12 hr of sustaining injury.</p>	<p>2. There were no significant differences in adverse event outcomes between patients who received riluzole and the registry group, however a mild to moderate elevation of liver enzymes was observed in riluzole group compared to baseline measurements (<math>p&gt;0.05</math>).</p> <p><b>Analyses comparing patients with cervical injuries only:</b></p> <p>3. After 90 days, patients who received riluzole experienced significant improvement in motor function compared to patients in registry (<math>p=0.021</math>). This difference was no longer seen after 180 days (<math>p&gt;0.05</math>).</p> <p>4. After 90 and 180 days, there were no significant differences in sensory function between patients who received riluzole and patients in the registry (<math>p&gt;0.05</math>).</p> <p>5. A higher percentage of patients who received riluzole converted to a higher grade than patients from the registry.</p> <p>6. After 180 days, there were no significant differences in functional recovery based on SCIM scores between patients who received riluzole and patients in the registry (<math>p&gt;0.05</math>).</p> <p><b>Analyses comparing patients with thoracic injuries only:</b></p> <p>7. The authors note the 8 patients with thoracic injuries gained motor function, pinprick sensation, and improved by at least 1 grade on the AIS, however no statistical analyses were reported. The authors did not mention improvements in light touch sensation or functional recovery using SCIM scores.</p>