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### Spinal Cord Fusion in Acute Spinal Cord Injury of Dog

Employing an acute dog model of spinal cord injury (SCI) using a diamond knife to generate a clean cut with little crush injury, we show that application of PEG preparations on the severed ends effects considerable neuroprotection and repair. Our results show that electrical continuity starts to be detected one hour after injury, and that BBB scores reach approximately 50% of the sham levels after three to four weeks. This level of restoration of function continues out to 6 month, which is the longest we assessed the dog. Neurophysiological and DTI MR data confirm electrophysiological and anatomical continuity. This study suggests that a form of spinal cord injury can effectively be treated and points out a way to treat spinal cord injury patients by removing the injured segment and, along with vertebral shortening, reapproximating and fusing the two stumps.

### Biography

Xiaoping Ren received his M.D in Harbin Medical University in 1984. He performed his Clinical and Research Hand Fellowship training in University of Louisville in Kentucky (1996-2000). Currently, he has professor position in Harbin Medical University in China and adjunct faculty in Loyola University Chicago in US. Dr. Ren has had over 60 publications in peer-reviewed journals and he is holding active Memberships of the American Association for Hand Surgery, Orthopedics and Neurological of American Academy and the American Heart Association. He also service as peer-reviewer of several journals. As well as practice as a Hand and Microsurgeon in clinic, his research interest is on protective strategies against ischemia/reperfusion of CNS and SCI functional recovery.

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