Supplementary Online Content

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eTable 1. Summary of Data sets

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eTable 2. Baseline, Treatment, and Follow-up Variables Included in Combined Data set

eReferences

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Summary of Data sets			
	NACTN SCI Registry	**STASCIS**	**NASCIS III**
N	880	313	499
Enrollment period	Jun 2005 to Mar 2017	Aug 2002 to Sept 2009	Dec 1991 to Sept 1995
No. of centers	11	6	16
Country	United States Canada	United States Canada	United States Canada
Eligibility criteria			
Age (yrs)	≥18	18-80	≥14
AIS grade	A-D	A-D	A-D
Neurological level	Any level	Cervical (C2 to T1)	Any level
Treatment	None prescribed	Surgical decompression	Standard- or high-dose MPSS or tirilazad mesylate

This study used data derived from a merger of three independent large prospective, multi-center datasets of SCI patients:

1. the North American Clinical Trials Network (NACTN) SCI Registry[1]
2. the Surgical Timing in Acute Spinal Cord Injury Study (STASCIS)[2]
3. the National Acute Spinal Cord Injury Study (NASCIS) III[3]

A description of each of the above data registries is provided and summarized in eTable 1.

eAppendix. Description of Each Data set

NACTN SCI REGISTRY

The North American Clinical Trials Network (NACTN) is a consortium of 11 university-affiliated neurosurgical departments established in 2004 with the aim of bringing basic science discoveries in neuroprotection and regeneration for SCI to clinical trials, and ultimately, clinical practice.[1] NACTN is sponsored by the Christopher & Dana Reeve Foundation and supported by the Telemedicine & Advanced Technology Research Center (TATRC), US Army Medical Research and Materiel Command (USAMRMC). Data from patients 18 years or older admitted through the emergency department of a NACTN center with an acute traumatic SCI are prospectively collected and stored in the NACTN SCI Registry (ClinicalTrials.gov Identifier NCT00178724). No specific intervention is prescribed other than standard of care for SCI, intensive monitoring, and frequent follow-up care. Neurological outcomes are assessed by ASIA/International Standards for Neurological Classification of Spinal Cord Injury (ISNCSCI) standard examination at fixed intervals: pre-operative, post-operative, 2 weeks, acute care discharge, 3 months, 6 months, 12 months, 36 months, and 48 months.

Participating Centers
University of Toronto, Toronto, ON, Canada
University of Texas Health Science Center, Houston, TX, USA
University of Virginia, Charlottesville, VA, USA
University of Louisville, Louisville, KY, USA
University of Maryland, Baltimore, MD, USA
Walter Reed National Military Medical Center, Bethesda, MD, USA
Thomas Jefferson University, Philadelphia, PA, USA
University of Miami, Miami, FL, USA
Brooke Army Medical Center, Fort Sam Houston, San Antonio, TX, USA
Louisiana State University Health Sciences Center New Orleans, New Orleans, LA, USA
Vanderbilt University Medical Center, Nashville, TN, USA

STASCIS

The Surgical Timing in Acute Spinal Cord Injury Study (STASCIS) was a multi-center, international, prospective cohort study evaluating the efficacy of early (< 24 hrs. after injury) versus late (≥ 24 hrs. after injury) decompressive surgery after traumatic cervical SCI.[2] Eligible patients were those 16 to 80 years old presenting with an acute traumatic cervical SCI, with an initial Glasgow Coma Scale score of over 13, initial ASIA Impairment Scale (AIS) grade of A to D, and neurological level of injury between C2 and T1. Patients with pre-injury major neurological deficits or disease, those who arrived at hospital over 24 hours after injury, and those who underwent surgery greater than 7 days after SCI were excluded. STASCIS enrolled 313 patients from 6 North American centers between 2002 and 2009. Neurological outcomes were evaluated at baseline and 6-month follow-up by ISNCSCI motor and sensory scores and AIS grade.

Participating Centers
University of Toronto, Toronto, ON, Canada
Thomas Jefferson University, Philadelphia, PA, USA
University of Virginia, Charlottesville, VA, USA
University of Maryland, Baltimore, MD, USA
University of British Columbia, Vancouver, BC, Canada
University of Kansas, Kansas City, KS, USA

NASCIS III

The National Acute Spinal Cord Injury Study (NASCIS) III was a randomized controlled trial comparing the efficacy and safety of MPSS administered for 24 hours, MPSS administered for 48 hours, and tirilazad mesylate administered for 48 hours in patients with acute traumatic SCI.[3] In total, 499 patients were enrolled from 1991 to 1995 at 16 acute SCI centers in North America. Eligibility criteria included randomization within 6 hours of injury to receive the study drug within 8 hours and age 14 years or older. Exclusion criteria included pregnancy, serious health condition that might affect treatment assessment, weight over 109 kg, gunshot wound, and previous spinal injury. Motor and sensory function was assessed in the emergency department immediately after injury and at 6 weeks and 6 months after injury.

Participating Centers
Yale University, New Haven, CT, USA
New York University, New York, NY, USA
Medical University of South Carolina, Charleston, SC, USA
University of California, San Diego, San Diego, CA, USA
University of California, Davis, Davis, CA, USA
University of California, San Francisco, San Francisco, CA, USA
Barrow Neurological Institute, Phoenix, AZ, USA
University of Iowa, Iowa City, IA, USA
University of Washington, Seattle, WA, USA
Allegheny General Hospital, Pittsburgh, PA, USA
Toronto Western Hospital, Toronto, ON, Canada
Sunnybrook Medical Centre, Toronto, ON, Canada
University of Maryland, College Park, MD, USA
Henry Ford Hospital, Detroit, MI, USA
Washington Hospital Center, Washington, DC, USA
University of Texas Medical Branch, Galveston, TX, USA

eTable 2. Baseline, Treatment, and Follow-up Variables Included in Combined Data set			
Variable	**NACTN SCI Registry**	**STASCIS**	**NASCIS III**
Baseline			
Age	•	•	•
Sex	•	•	•
Mechanism of injury	•	•	•
Admission ASIA/ISNCSCI examination	•	•	•
Admission GCS	•	•	•
Treatment			
MPSS	•	•	•
Surgical decompression	•	•	•
Timing of surgical decompression	•	•	•
Follow-up			
6-month or 1-year ASIA/ISNCSCI examination	•	•	•
6-month or 1-year FIM	•	•	•

The three datasets were merged to form a single harmonized dataset by extracting common data elements. With 880 patients from the NACTN SCI Registry, 313 from STASCIS, and 499 from NASCIS III, the harmonized dataset contained on a total of 1,692 SCI patients. A list of baseline, treatment, and follow-up data elements included in the combined dataset appears in eTable 2.

eReferences

1. Grossman RG, Toups EG, Frankowski RF, Burau KD, Howley S. North American Clinical Trials Network for the Treatment of Spinal Cord Injury: goals and progress. *J Neurosurg Spine.* 2012;17(1 Suppl):6-10.
2. Fehlings MG, Vaccaro A, Wilson JR, et al. Early versus delayed decompression for traumatic cervical spinal cord injury: results of the Surgical Timing in Acute Spinal Cord Injury Study (STASCIS). *PLoS One.* 2012;7(2):e32037.
3. Bracken MB, Shepard MJ, Holford TR, et al. Administration of methylprednisolone for 24 or 48 hours or tirilazad mesylate for 48 hours in the treatment of acute spinal cord injury. Results of the Third National Acute Spinal Cord Injury Randomized Controlled Trial. National Acute Spinal Cord Injury Study. *JAMA.* 1997;277(20):1597-1604.