

Decompression in tetraparesis after low-energy trauma in cervical spinal canal stenosis: the sooner the better?

Joanna M. Przybyl, Nicolas H. von der Höh, Philipp Pieroh Anna Völker, Christoph-Eckhard Heyde

Executive Director of the Department of Orthopaedic surgery, Traumatology and Plastic surgery &
Head of the Department of Spine Surgery : Prof. Dr. med. Christoph-E. Heyde

Cervical Spine Research Society - Europe

Disclosures



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Introduction

Low-energy trauma without fracture or discoligamentous injury can lead to neurological complications at elderly patients (>65 years) with degenerative cervical stenosis

We found good evidence level regarding high-energy trauma with significant better neurological outcome while surgery was performed within 24h in young adults

Rare Literature was found for timing and treatment option for elderly (>65y) with low evidence

Aim of the Study:

Does the time of decompression have an influence on the neurological outcome of low-energy trauma compared to the literature on high-energy trauma?

Fehlings MG, et al. *PLoS One*. 2012

Aarabi et al., *Neurosurgery*, 2013

Materials and Methods

Retrospective analysis 01/2010-01/2019

We included all patients with tetraparesis without fracture or discoligamentous injury after low-energy trauma with existing cervical stenosis.

Low energy-trauma was defined as a fall from standing or sitting as well as missteps in potholes or steps.

Exclusion criteria were bleeding, infection, tumour or injury to the cervical structures.

We divided the patients into two groups regarding to the treatment window:
Group 1 <24h vs. Group 2 > 24h.

Depending to the main pathology, ventral or dorsal treatment was performed including decompression and stabilisation.

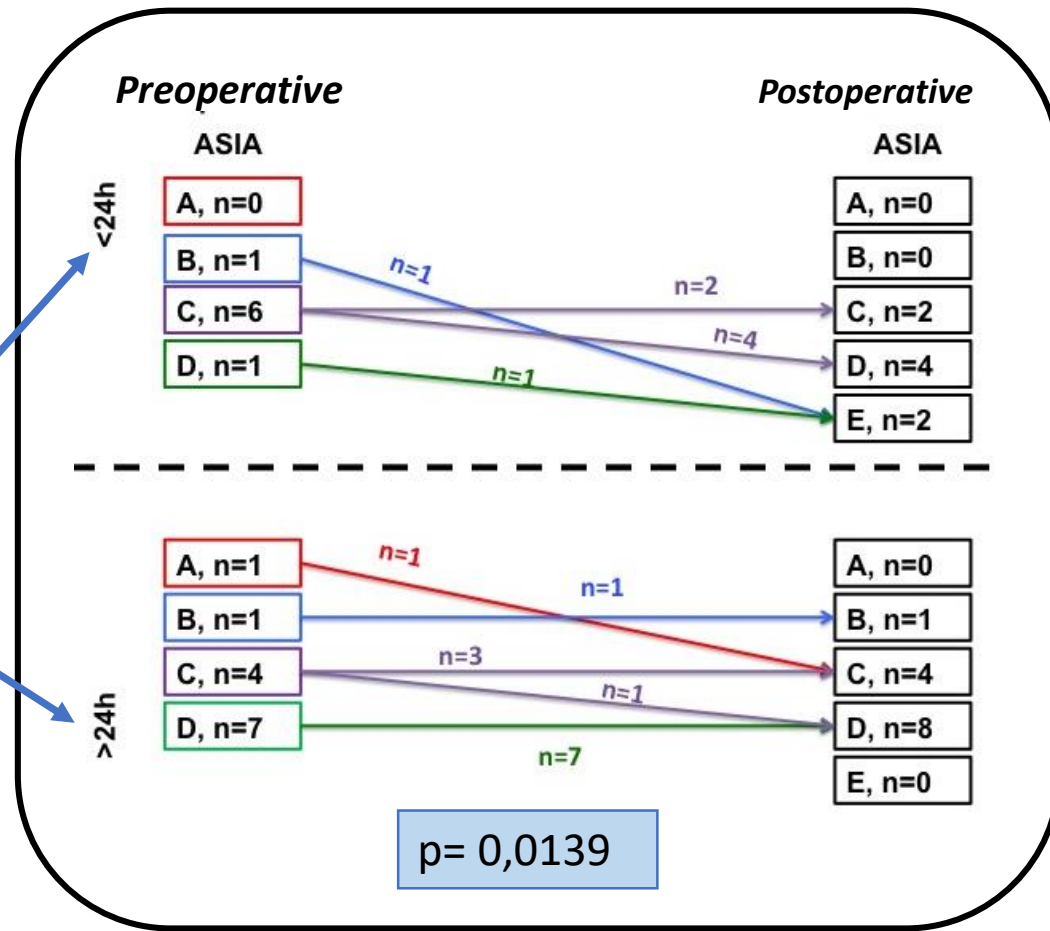
Clinical results were examined using the ASIA score (pre- and post surgery and follow-up)

Results

n=21 patients, m:w= 1:2, 68±11.3 years

FU = 9.19 (3-42) months

	N
GCS 15	21 (100%)
Other injuries	0
Lost of follow up	10 (47,6%)
Falling from stand	5 (23,8%)
surgery < 24h	8 (38%)
surgery >24h	13 (72%)
Recovering >1 ASIA Grad	
OP < 24h	6 (75%)
OP > 24h	2 (15,4%)
Surgical access	
dorsal	17 (81%)
ventral	3 (14,3%)
dorsoventral	1 (4,7%)



Conclusion/discussion

- Low-energy-trauma can lead to neurological complications in pre-existing degenerative cervical stenosis also without detectable osseous or ligamentous injuries
- Rapid treatment within less than 24 hours led to a significant improvement of the neurological outcome in our small cohort
- Our results are comparable with the recommendations of current literature regarding high energy trauma in young adults
- We would recommend early surgical treatment within 24h



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