



# Neurocirugía

<https://www.revistaneurocirugia.com>



## C0078 - EARLY DECOMPRESSION OF THE SPINAL CORD AND RISK OF COMPLICATIONS: RESULTS OF A RETROSPECTIVE COHORT STUDY

A. Grin, A. **Kordonskiy**, I. Lvov, A. Kaykov and O. Bogdanova

*Sklifosofsky Research Institute of Emergency Care, Moscow, Russia.*

### Resumen

**Objectives:** To identify possible relationships between the timing of surgery, improvement in neurological status, and development of early and late complications in patients with complicated spinal injuries (CSI).

**Methods:** All patients (61 in total) that were operated on for CSI from 2014 to 2017 were included in the study. Exclusion criteria were: severe combined trauma (Injury Severity Score [ISS] > 25), severe somatic disease, previous spinal surgery, or unavailability for catamnesis. Patients were divided into groups depending on the timing of spinal cord decompression from the moment of injury: group I, < 8 hours; II, 9-24 hours; III, 1-7 days; IV, > 7 days. The mean follow-up was 15 months. The dynamics of neurological status were evaluated using the American Spinal Injury Association (ASIA) and Japanese Orthopedic Association (JOA) scales.

**Results:** There were no statistically significant differences in demographic data between the groups. Improvement of neurological status was observed in 60% of group I, 33% of group II, 22% of group III, and 27% of group IV. Although a stable trend was observed for the improvement of neurological status in group I, there was no statistically significant difference between the groups in terms of the dynamics of neurological status. The incidence of complications was 40% in group I, 33% in group II, 30% in group III, and 27% in group IV; these percentages were not statistically significantly different. Mortality in group I was significantly higher (20%), than groups II (11%), III (8%), or IV (9%).

**Conclusions:** No statistically significant relationship between the timing of surgery and neurological outcome was identified. However, patients who underwent surgery earlier had a higher probability of restoration of neurological status, although the risks of complications and death were also higher. Future multicenter studies are required to determine the patient characteristics associated with high perioperative risks.