

The Outcome of Methylprednisolone Treatment of the Patients with Acute Traumatic Spinal Cord Injury: a Hospital-based Study in Taiwan

林樹基;邱文達;蔡行瀚;劉正耀;邱弘毅;林茂榮;蔣明富

Abstract

OBJECTIVES: This study is intended to investigate the clinical outcome with and without methylprednisolone (MP) treatment in 110 patients who suffered from acute traumatic spinal cord injury in Taiwan.

METHOD: This is a retrospective review of the medical reports of patients who had acute traumatic spinal cord injury in 18 hospitals in Taipei City (urban area) and 4 hospitals in Hualien County (rural area) during the last 12-month period from June 1, 2000 to May 31, 2001.

The data of 110 patients aged between 16 and 90 years were collected and evaluated for their neurological status. The patients with isolated nerve-root disorder and open neck wound were excluded from this study. The subjects were divided into two groups: those treated with methylprednisolone and those without methylprednisolone after hospital admission.

Comparisons of those two groups included 21 demographic and clinical characteristics: age, sex, cause of injury, the number of associated injuries, use of alcohol, time elapsed between the injury and admission, number of hospital transfers before treatment, spinal cord injury (SCI) severity, SCI level, SCI completeness, past history of major diseases, past history of spinal disease, mean blood pressure on admission, systolic BP on admission, Revised Trauma Score on admission, CT diagnosis of the spine, MRI diagnosis of the spine, level of the hospital, location of the hospital, surgery after admission, and rehabilitation after admission. **RESULTS:** Outcome measure MP Non-MP P value Mean length of hospitalization (day) 45.28 31.94 0.144 Mean length of stay in ICU (day) 4.99 3.39 0.37 Mean length of respirator use (day) 18.87 8.36 0.071 Number of tracheotomy 9 3 0.532 Mean duration from hospital admission to the start of rehabilitation (day) 25.82 25.13 0.922 Mean score of in-hospital motor function change 2.18 1.45 0.764 Mean score of motor function change six weeks after the treatment 2.76 0.20 0.057 Number of in-hospital mortality 2 1 0.714 Frequency of in-hospital complications 1.29 0.87 0.099 Number of respiratory failure 9 4 0.483 Number of infectious disease 42 17 0.038 Number of UGI bleeding 6 1 0.418 Number of neurogenic

bladder 25 10 0.303 CONCLUSION: The results of this study suggest that the patients with SCI are more likely to have infectious complications if receiving methylprednisolone. However, there are no significant differences among other outcome parameters whether the patients receive methylprednisolone treatment.