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Comparison of Post-Operative Clinical Outcome of Patients with PosteriorInstrumentation After Spinal Cord Injury in Thoracic, Thoracolumbar, and Lumbar Region at Haji Adam Malik General Hospital, Medan from 2016 to 2018

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Abstract : Introduction : Spinal cord injury is a damaging situation related to severe disability and death after trauma.And the term spinal cord injury refers to damage of the spinal cord resulting from trauma. Spinal injuries treatment is still in debate for some cases, whether using conservative or surgical methods.
Material and Methods : The study was a retrospective, unpaired observational analytic study with a cross-sectional approach. It was conducted at Haji Adam Malik General Hospital, Medan from January 2016 to December 2018. Clinical outcome of patientswere calculated using SF 36, ODI, and VAS.Data would be tested using the Saphiro-Wilk test. We were using the significance level of 1% (0.01) and the relative significance level of 10% (0.1).
Results : Clinical outcomes of patients with spinal cord injuries before posterior instrumentation rated using ODI and VAS were 75.93±6.75 and 4.75±0.98 respectively. Meanwhile, the scores were 10.75±3.29 (ODI) and 1.77±0.72 (VAS) post-operatively. Using SF-36, the scores were
72.9±16.5 (PF); 58±23.1 (PH); 63.1±21.8 (EP); 62.5±12 (ENE); 84.1±14.8 (EMO); 79.6±23.5 (SF); 62±125.3 (PAIN); 49.5±3.4 (GH); and 72±7.8 (HC) pre-operatively. After posterior instrumentation, the scores were 94.5±6.7 (PF); 100±0 (PH); 79.9±32.9 (EP); 88.6±13.7 (ENE); 92.3±1.7 (EMO); 100±0 (SF); 99.9±10.4 (PAIN); 89.3±14.9 (GH); and 92.4±9.7 (HC). **Discussion :** In this study, patients with thoracal, thoracolumbar and lumbar injuries who underwent surgery experienced significant improvements in quality of life. This is indicated by the significant difference in ODI, VAS, and SF-36 scores before and after surgery. The results of this study were consistent with other studies conducted by Hao et al, which showed that there was an improvement in the quality of life of patients after surgery. **Conclusion :** There are significant improvements in patient's quality of life after posterior instrumentation of the spinal cord injury in thoracal, thoracolumbar, and lumbar regions based on the clinical outcomes.
Keywords : *clinical outcome; posterior instrumentation; spinal cord injury; ODI; SF-36; VAS.*

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