

ABSTRACT

Introduction: Spondylitis Tuberculosis (TB) or Pott's Disease is a *Mycobacterium tuberculosis* infection of the vertebrae. Spondylitis TB occurs as a result of hematogenous spread of bacteria to the spinal vessels. Spondylitis TB is the most dangerous form of musculoskeletal TB because it can cause bone destruction, deformity, and neurologic deficits. The role of the radiologist in determining the factors associated with neurologic deficits is very important. Magnetic Resonance Imaging (MRI) lets researchers to look at the causes of neurological abnormalities in spondylitis TB patients. One of the results of the MRI examination is Maximum Spinal Cord Compression (MSCC) which measures the compression of the spinal cord quantitatively.

Objective : The goal of this study is to assess the relationship between the value of MSCC and neurologic deficit in spondylitis TB patients using Magnetic Resonance Imaging.

Methods: This was a cross-sectional observational correlation analysis study with retrospective non-random sequential sampling. Data was collected retrospectively from Dr. Sardjito Central General Hospital Yogyakarta's spinal MRI tests from January 2017 to December 2020. Patients with Spondylitis TB who had a spinal MRI and a neurological status test were used as research participants. The result of MSCC measurement and the correlation between the MSCC and neurologic deficit was determined using descriptive analysis and Spearman Correlation Coefficient Test.

Results: There were 31 participants. The Spearman Correlation Coefficient test revealed a moderate positive correlation between MSCC and the degree of neurologic deficit in this study, with $p=0.015$ ($p<0.05$) and $r = 0.43$, indicating that the higher the value of MSCC, the higher the degree of neurologic deficit.

Conclusion: Based on measurements MSCC in patients with spondylitis TB It has been proven that there is a significant and moderate correlation between the the value of MSCC on MRI examination and the degree of neurologic deficit.