# Intramedullary high signal intensity on T2-weighted MR imaging in cervical spondylotic myelopathy- prediction of prognosis with type of intensity

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摘要

**Abstract**

PURPOSE: To examine whether the different appearances of intramedullary high signal intensity (SI) on T2-weighted MR images in cervical spondylotic myelopathy are related to differences in surgical prognosis.

MATERIALS AND METHODS: The magnetic resonance (MR) findings and Japanese Orthopedic Association (JOA) score of 64 cervical spondylotic myelopathy patients, who underwent decompression surgery, were evaluated. SIs were classified as type 0 if no intramedullary high SI on T2-weighted MR images was noted, type 1 if a predominantly (>50%) faint and fuzzy border of high SI was noted, or type 2 if a predominantly (>50%) intense and well-defined border of high SI was noted. Postoperative JOA scoring and MR imaging were also performed 6 months after surgery. Recovery ratios were calculated.

RESULTS: There were 20 type 0, 23 type 1, and 21 type 2 cases. Statistical analyses showed no significant difference in age, sex, cervical curvature, and preoperative JOA score between the three groups. Statistical analyses of the recovery ratio showed significantly poor prognosis of type 2 compared with type 1 ($P < .001$) and type 0 ($P = .001$), but no difference between types 0 and 1 ($P = .317$). After controlling for factors of age, sex, preoperative JOA score, cervical curvature, and cord compression ratio, analysis of covariance showed the same result.

CONCLUSION: Type 1 intramedullary high SI on T2-weighted MR images indicates a better surgical outcome than does type 2.