Cervical disc-level canal diameter predicts spinal injury

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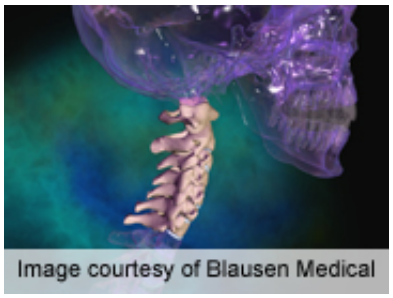

Disc-level canal diameter determined from magnetic resonance imaging can identify patients at risk for acute spinal cord injury after minor trauma, according to a study published in the June issue of *The Spine Journal*.

(HealthDay)—Disc-level canal diameter determined from magnetic resonance imaging (MRI) can identify patients at risk for acute spinal cord injury (SCI) after minor trauma, according to a study published in the June issue of *The Spine Journal*.

Nikolaus Aebli, M.D., Ph.D., from the Swiss Paraplegic Centre in Nottwil, and colleagues retrospectively studied conventional lateral radiographs and sagittal T2-weighted MRIs (C3 to C7) of 52 consecutive patients with acute cervical SCI and 131 patients showing no neurologic deficits after a minor trauma to the cervical spine.

The researchers found that all investigated MRI parameters in the SCI group, including spinal canal to vertebral body ratio, the space available for the cord, and the canal-to-cord ratio, were smaller compared with the control group. Among the different American Spinal Injury Association impairment score groups there were no significant differences. The largest positive predictive value and likelihood ratio for predicting SCI came using a cut-off value of 8.0 mm for the minimal sagittal disc-level canal diameter.

"Patients at risk of acute SCI after a minor trauma to the cervical spine can be identified by applying a disc-level canal diameter cut-off value (measured on MRI) of 8 mm," the authors write. "Additional factors (e.g., trauma mechanism) to the radiological characteristics of the cervical spinal canal affect the severity of acute SCI after a minor trauma to the cervical spine."

More information: Abstract
Full Text (subscription or payment may be required)