

Functional Magnetic Resonance Imaging of the Lumbar Spine (Review)

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Abstract

The high prevalence of the lumbar spine degenerative changes, significant disability of patients with chronic pain syndrome along with low correlation of radiological and clinical presentation requires searching and implementation of new survey techniques to the diagnostic algorithm. Functional magnetic-resonance imaging provides a new perspective to study the physiology and pathophysiology of degenerative processes. These techniques allow evaluating almost all the structures of the vertebral-motional segments and its positional relationship with anatomical structures of the vertebral canal and intervertebral foramen. In addition, functional magnetic resonance methods permit to detect the signs of instability of soft tissue structures of the spine and neural structures compression during the axial load researches.

Key words: Weight-Bearing Magnetic Resonance Imaging, Axial Load Magnetic Resonance Imaging, Lumbar Spine, Spine Degenerative Disease.

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