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Association of subcutaneous adiposity with MRI findings in youth patients with low back pain

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Purpose

To evaluate whether lumbar disk pathology and vertebral body endplate changes are associated with dorsal subcutaneous thickness (DST) in young adults with low back pain.

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Fig. 1: *Midsagittal image of lumbar spine showing level of measurement of dorsal...*

Methods and materials

Retrospectively, lumbar MRI examinations of young adults (range 18 to 35 years old) performed within 5 months were analyzed. Patients with onset of low back pain within the last six months were included. None of the patients had a history of trauma or previous MRI examination. Lumbar disc degeneration was evaluated using Pfirrmann classification and vertebral body endplate changes were evaluated using Modic classification. [1], [2]. Displacement of disc material beyond the interspace was classified using lumbar disc nomenclature: version 2.0. [3] For the purpose...

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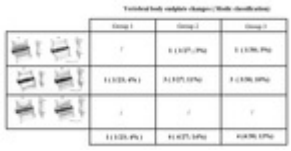

Table 1: *Vertebral body endplate changes, evaluated using Modic classification.*

Table 2: *Intervertebral disc displacement, using lumbar disc nomenclature: version 2.0*

Results

Eighty patients met the criteria for this study, of which 42 males and 38 females. Group 1 consisted of 23, Group 2 of 27 and Group 3 of 30 patients. Vertebral body endplate changes were observed in only 8 patients (8/80, 10%), evenly distributed in all groups. [Table 1] Bulging disc is noted in 40% (9/23) of patients in Group 1, 48% (13/27) in Group 2 and 3% (9/30) in Group 3.Findings of protrusion in Group 1 are in 13% (3/23), 3% (1/27) in Group...

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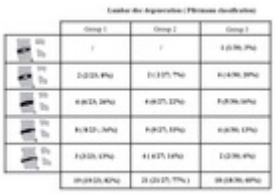

Table 3: *Lumbar disc degeneration, using Pfirrmann classification*

Conclusion

Lumbar disk pathology is associated with subcutaneous adiposity in young adults with low back pain.

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Personal information and conflict of interest

A. Tochko; Skopje/MK - Author at University institute of radiology G. Spirov; Skopje/MK - University institute for positron-emission tomography

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