Pfirrmann grading system

Pfirrmann disc grade is a useful scoring tool for evaluating disc degeneration, but normal values according to aging process has not been elucidated.

Intervertebral disc degeneration is natural course after one's 2nd decades. And its incidence and grade were increased with age, and more affected by sexual difference after 6th decades.\(^1\)

**Classification**

Disc degeneration can be graded on MRI T2 spin-echo sequence weighted images using a grading system proposed by Pfirrmann.

This classification is not used on routine spine reports, being more important for research purposes.

**Grade I**

Disc is homogeneous with bright hyperintense white signal intensity and normal disc height.

**Grade II**

Disc is inhomogeneous, but keeping the hyperintense white signal.

Nucleus and annulus are clearly differentiated and a horizontal gray band could be present.

Disc height is normal.

**Grade III**

Disc is inhomogeneous with an intermittent gray signal intensity.

distinction between nucleus and annulus is unclear.

disc height is normal or slightly decreased.

**Grade IV**

Disc is inhomogeneous with a hypointense dark gray signal intensity.

there is no more distinction between the nucleus and annulus.

disc height is slightly or moderately decreased.

Moderate disk degeneration (Pfirrmann IV) in lower lumbar segments is a risk factor of disk herniation or foraminal stenosis requiring reoperation after MD in LSS.\(^2\)

**Grade V**

Disc is inhomogeneous with a hypointense black signal intensity.

there is no more distinction between the nucleus and annulus.
The disc space is collapsed.


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