Index Name : Lane index and Wilke index

Radiological indexes for lumbar osteoarthritis

Generalities :

Seven different radiological grading systems for lumbar disc degeneration have been described to date. Two grading systems developed for disc degeneration can be recommended on the basis of their good inter-observer reliability (1, 2). There is no high quality grading system recommended for lumbar facet joints evaluation.

Radiographic grading of lumbar disc degeneration is done on lateral view for the Lane grading system (1). This grading system asseses joint space narrowing, anterior and posterior osteophyte formation, and subchondral sclerosis with a scale from 0 (none) to 4 (severe). For the Wilke grading system, radiographic evaluation is done on both lateral and postero-anterior view (2). This grading system asseses height loss, osteophyte formation, and diffuse sclerosis with a scale from 0 to 3.

Target population :

Low back pain patients

Method of use :

Description of the radiological features of the Lane grading system

Grade 0: Normal joint (0 for osteophytes and narrowing)

Grade 1: Mild (1) narrowing or mild (1) osteophytes

Grade 2: Moderate-severe (2-3) narrowing and/or moderate-severe (2-3) osteophytes

Description of the radiological features of the Wilke grading system (sum of points of height loss, osteophyte formation and diffuse sclerosis)

Grade 0 : 0 point = no degeneration

Grade 1 : 1 – 3 points = mild degeneration

Grade 2 : 4 – 6 points = moderate degeneration

Grade 3 : 7 – 9 points = severe degeneration

References :

1) Lane NE, Nevitt MC, Genant HK, Hochberg MC. Reliability of new indices of radiographic osteoarthritis of the hand and hip and lumbar disc degeneration. J Rheumatol. 1993;20(11):1911-8.
2) Wilke HJ, Rohlmann F, Neidlinger-Wilke C, Werner K, Claes L, Kettler A. Validity and interobserver agreement of a new radiographic grading system for intervertebral disc degeneration: Part I. Lumbar spine. Eur Spine J. 2006;15:720-30.

Links :

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http://www.springerlink.com/content/p41184g930lw8g16/