

Review Article

Lumbar disc nomenclature: version 2.0

Recommendations of the combined task forces of the North American Spine Society, the American Society of Spine Radiology and the American Society of Neuroradiology

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Abstract

BACKGROUND CONTEXT: The paper “Nomenclature and classification of lumbar disc pathology, recommendations of the combined task forces of the North American Spine Society, the American Society of Spine Radiology and the American Society of Neuroradiology,” was published in 2001 in *Spine* (© Lippincott, Williams & Wilkins). It was authored by David Fardon, MD, and Pierre Milette, MD, and formally endorsed by the American Society of Spine Radiology (ASSR), American Society of Neuroradiology (ASNR), and North American Spine Society (NASS). Its purpose was to promote greater clarity and consistency of usage of spinal terminology, and it has served this purpose well for over a decade. Since 2001, there has been sufficient evolution in our understanding of the lumbar disc to suggest the need for revision and updating of the original document. The revised document is presented here, and it represents the consensus recommendations of contemporary combined task forces of the ASSR, ASNR, and NASS. This article reflects changes consistent with current concepts in radiologic and clinical care.

PURPOSE: To provide a resource that promotes a clear understanding of lumbar disc terminology amongst clinicians, radiologists, and researchers. All the concerned need standard terms for the normal and pathologic conditions of lumbar discs that can be used accurately and consistently and thus best serve patients with disc disorders.

STUDY DESIGN: This article comprises a review of the literature.

METHODS: A PubMed search was performed for literature pertaining to the lumbar disc. The task force members individually and collectively reviewed the literature and revised the 2001 document. The revised document was then submitted for review to the governing boards of the ASSR, ASNR, and NASS. After further revision based on the feedback from the governing boards, the article was approved for publication by the governing boards of the three societies, as representative of the consensus recommendations of the societies.

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The disclosure key can be found in the Table of Contents and at www.TheSpineJournalOnline.com.

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RESULTS: The article provides a discussion of the recommended diagnostic categories pertaining to the lumbar disc: normal; congenital/developmental variation; degeneration; trauma; infection/inflammation; neoplasia; and/or morphologic variant of uncertain significance. The article provides a glossary of terms pertaining to the lumbar disc, a detailed discussion of these terms, and their recommended usage. Terms are described as preferred, nonpreferred, nonstandard, and colloquial. Updated illustrations pictorially portray certain key terms. Literature references that provided the basis for the task force recommendations are included.

CONCLUSIONS: We have revised and updated a document that, since 2001, has provided a widely acceptable nomenclature that helps maintain consistency and accuracy in the description of the anatomic and physiologic properties of the normal and abnormal lumbar disc and that serves as a system for classification and reporting built upon that nomenclature. © 2014 The North American Spine Society, The American Society of Spine Radiology and The American Society of Neuroradiology. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/3.0/>).

Keywords: Annular fissure; Annular tear; Disc bulge (bulging disc); Disc degeneration; Disc extrusion; Disc herniation; Disc nomenclature; Disc protrusion; High intensity zone; Lumbar intervertebral disc

Preface

The nomenclature and classification of lumbar disc pathology consensus, published in 2001, by the collaborative efforts of the North American Spine Society (NASS), the American Society of Spine Radiology (ASSR) and the American Society of Neuroradiology (ASNR), has guided radiologists, clinicians, and interested public for over a decade [1]. This document has passed the test of time. Responding to an initiative from the ASSR, a task force of spine physicians from the ASSR, ASNR, and NASS has reviewed and modified the document. This revised document preserves the format and most of the language of the original, with changes consistent with current concepts in radiologic and clinical care. The modifications deal primarily with the following: updating and expansion of Text, Glossary, and References to meet contemporary needs; revision of Figures to provide greater clarity; emphasis of the term “annular fissure” in place of “annular tear”; refinement of the definitions of “acute” and “chronic” disc herniations; revision of the distinction between disc herniation and asymmetrically bulging disc; elimination of the Tables in favor of greater clarity from the revised Text and Figures; and deletion of the section of Reporting and Coding because of frequent changes in those practices, which are best addressed by other publications. Several other minor amendments have been made. This revision will update a workable standard nomenclature, accepted and used universally by imaging and clinical physicians.

Introduction and history

Physicians need standard terms for normal and pathologic conditions of lumbar discs [2–5]. Terms that can be interpreted accurately, consistently, and with reasonable precision are particularly important for communicating impressions gained from imaging for clinical diagnostic and therapeutic decision-making. Although clear understanding of the disc terminology between radiologists and clinicians

is the focus of this work, such understanding can be critical, also to patients, families, employers, insurers, jurists, social planners, and researchers.

In 1995, a multidisciplinary task force from the NASS addressed the deficiencies in commonly used terms defining the conditions of the lumbar disc. It cited several documentations of the problem [6–11] and made detailed recommendations for standardization. Its work was published in a copublication of the NASS and the American Academy of Orthopaedic Surgeons [9]. The work had not been otherwise endorsed by major organizations and had not been recognized as authoritative by radiology organizations. Many previous [3,7,9–19] and some subsequent [20–25] efforts addressed the issues, but were of more limited scope and none had gained a widespread acceptance.

Although the NASS 1995 effort was the most comprehensive at the time, it remained deficient in clarifying some controversial topics, lacking in its treatment of some issues, and did not provide recommendations for standardization of classification and reporting. To address the remaining needs, and in hopes of securing endorsement sufficient to result in universal standardizations, joint task forces (Co-Chairs David Fardon, MD, and Pierre Milette, MD) were formed by the NASS, ASNR, and ASSR, resulting in the first version of the document “Nomenclature and classification of lumbar disc pathology” [1]. Since then, time and experience suggested the need for revisions and updating of the original document. The revised document is presented here.

The general principles that guided the original document remain unchanged in this revision. The definitions are based on the anatomy and pathology, primarily as visualized on imaging studies. Recognizing that some criteria, under some circumstances, may be unknowable to the observer, the definitions of the terms are not dependent on or imply the value of specific tests. The definitions of diagnoses are not intended to imply external etiologic events such as trauma, they do not imply relationship to symptoms, and they do not define or imply the need for specific treatment.

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