

Spinal Nomenclature

ACUTE

Denoting a disease or symptoms usually of rapid onset, brief, not prolonged; opposite of chronic.

AGING DISC

Disc demonstrating features of normal aging. Spondylosis deformans possibly represents the normal aging process.

ANULUS, ANNULUS FIBROSUS

A multilaminated ligament surrounding the periphery of each disc space, attaching, cranial and caudal, to end-plate cartilage and ring apophyseal bone and blending centrally with nucleus pulposus.

BULGING DISC, BULGE

A disc in which the contour of the outer anulus extends, or appears to extend, in the horizontal (axial) plane beyond the edges of the disc space, over greater than 50% (180 degrees) of the circumference of the disc and usually less than 3mm beyond the edges of the vertebral body apophyses. Note: Bulging is an observation of the contour of the outer disc and is not a specific diagnosis. Bulging has been variously ascribed to redundancy of anulus secondary to loss of disc space height, ligamentous laxity, response to loading or angular motion, remodeling in response to adjacent pathology, unrecognized and atypical herniation, and illusion from volume averaging on CT axial images. Bulging may or may not represent pathologic change, physiologic variant, or normalcy. Bulging is not a form of herniation; discs known to be herniated should be diagnosed as herniation or, when appropriate, as specific types of herniation.

CAVITATION

Spaces, cysts, clefts, or cavities formed within the nucleus and inner anulus from disc degeneration.

CHRONIC

Denoting a disease or symptoms of slow progress, lasting a long time; opposite of acute.

CHRONIC DISC HERNIATION

Disc herniation with presence of calcification, ossification, or gas accumulation within the displaced disc material, suggesting that the herniation is not of recent origin. Note: The term implies the presence of calcification, ossification, or gas accumulation and should not be used for herniations of soft disc material, regardless of the duration of displacement.

DEGENERATED DISC, DEGENERATION

1. Changes in a disc characterized by desiccation, fibrosis and cleft formation in the nucleus, fissuring and mucinous degeneration of the anulus, defects and sclerosis of end-plates, and/or osteophytes at the vertebral apophyses. 2. Imaging manifestations commonly associated with such changes. 3. (Non-Standard) Changes in a disc related to aging. Note: Either of the first two definitions may be correct, depending upon context. Clinical features must be considered to determine whether degenerative changes are pathologic and what may or may not have contributed to their development. The term degenerated disc, in itself, does not infer knowledge of cause, relationship to aging, presence of symptoms, or need for treatment. See intervertebral osteochondrosis, spondylosis, spondylosis deformans.

DESICCATED DISC

1. Disc with reduced water content, usually primarily of nuclear tissues. 2. Imaging manifestations of reduced water content of the disc; or apparent reduced water content.

DISC (DISK)

Complex structure composed of nucleus, anulus, cartilaginous end-plates, and vertebral body ring apophyseal attachments of anulus.

EXTRUDED DISC, EXTRUSION

A herniated disc in which, in at least one plane, any one distance between the edges of the disc material beyond the disc space is greater than the distance between the edges of the base in the same plane, or when no continuity exists between the disc material beyond the disc space and that within the disc space. Note: The preferred definition is consistent with the common language image of extrusion as an expulsion of material from a container through and beyond an aperture. Displacement beyond the outer annulus of disc material with any distance between its edges greater than the distance between the edges of the base distinguishes extrusion from protrusion. Distinguishing extrusion from protrusion by imaging is best done by measuring the edges of the displaced material and remaining continuity with the disc of origin, whereas relationship of the displaced disc material to the aperture through which it has passed is more readily observed surgically. Characteristics of protrusion and extrusion may co-exist, in which case the disc should be subcategorized as extruded. Extruded discs in which all continuity with the disc of origin is lost may be further characterized as sequestered. Disc material displaced away from the site of extrusion may be characterized as migrated.

HERNIATED DISC, HERNIATION

Localized displacement of disc material beyond the normal margins of the intervertebral disc space. 2. (Non-Standard) [Any displacement of disc tissue beyond the disc space]. Note: Localized means, by way of convention, less than 50% (180 degrees) of the circumference of the disc. Disc material may include nucleus, cartilage, fragmented apophyseal bone, or fragmented annular tissue. The normal margins of the intervertebral disc space are defined, cranial and caudal, by the vertebral body end-plates and peripherally by the edges of the vertebral body ring apophyses, exclusive of osteophytic formations. Herniated disc generally refers to displacement of disc tissues through a disruption in the annulus, the exception being intravertebral herniations (Schmorl's nodes) in which the displacement is through vertebral end-plate. Herniated discs in the horizontal (axial) plane may be further subcategorized as protruded or extruded. Herniated disc is sometimes referred to as "herniated nucleus pulposus," but the term herniated disc is preferred because displaced disc tissues often include cartilage, bone fragments, or annular tissues. The term "ruptured disc" is used synonymously with herniated disc, but is more colloquial and can be easily confused with violent, traumatic rupture of the annulus or end-plate. The term "prolapse" has also been used as a general term for disc displacement, but its use has been inconsistent. The term herniated disc does not infer knowledge of cause, relation to injury or activity, concordance with symptoms, or need for treatment.

INTERVERTEBRAL OSTEOCHONDROSIS

Degenerative process of the spine involving the vertebral body end-plates, the nucleus pulposus, and the annulus fibrosus, which is characterized by disc space narrowing, vacuum phenomenon, and vertebral body reactive changes. Syn: deteriorated disc, chronic discopathy, osteochondrosis.

NORMAL DISC

1. A fully and normally developed disc with no changes attributable to trauma, disease, degeneration, or aging. The bilobular appearance of the adult nucleus is considered a sign of normal maturation. 2. (Non-Standard) [A disc that may contain one or more morphologic variants which would be considered normal given the clinical circumstances of the patient.]. Note: Many congenital and developmental variations may be normal in that they are not associated with symptoms; certain adaptive changes in the disc may be normal considering adjacent pathology, and certain degenerative phenomena may be normal given the patient's age; however, classification and reporting for medical purposes is best served if such discs are not considered normal. What is clinically normal for a given patient is a clinical judgment independent of the need to describe any variation in the disc itself.

OSTEOPHYTES

Focal hypertrophy of bone surface and/or ossification of soft tissue attachments to the bone.

PROTRUDED DISC, PROTRUSION

A herniated disc in which the greatest distance, in any plane, between the edges of the disc material beyond the disc space is less than the distance between the edges of the base in the same plane. 2. (Non-Standard) [A disc in which disc tissue beyond the disc space is contained within intact annulus]. 3. (Non-Standard) [Any, or unspecified type of, disc herniation.]. Note: The test of protrusion is that there must be a localized (less than 50% or 180 degrees of the circumference of the disc) displacement of disc tissue so that the distance between the edges of the displaced portion must not be greater than the distance between the corresponding edges of the base. A disc that has broken through the outer annulus at the apex, but maintains a broad continuity at the base, is protruded and uncontained. While sometimes used as a general term in the way herniation is defined here, the use of the term protrusion is best reserved for sub-categorization of herniations meeting the above criteria. See: extruded disc.

RUPTURED ANULUS

Disruption of the fibers of the annulus by sudden violent injury. Note: Separation of fibers of the annulus from degeneration, repeated minor trauma, other non-violent etiology, or when injury is simply a defining event in a degenerative process should be termed fissure or tear of the annulus. Rupture is appropriate when there is other evidence of sudden violent injury to a previously normal annulus. Ruptured annulus is not synonymous with ruptured disc, which is a colloquial equivalent of disc herniation.

SCHMORL'S NODE

See intravertebral herniation.

SEQUESTERED DISC, SEQUESTRATION

An extruded disc in which a portion of the disc tissue is displaced beyond the outer annulus and maintains no connection by disc tissue with the disc of origin. Note: An extruded disc may be subcategorized as "sequestered" if no disc tissue bridges the displaced portion and the tissues of the disc of origin. If there is a fragment of disc tissue that is not continuous with parent nucleus, but still contained, even in part, by annular tissues, the disc may be characterized as protruded or extruded, but not as sequestered. If even a tenuous connection by disc tissue remains between a displaced fragment and disc of origin, the disc is not sequestered. If a displaced fragment has no connection with the disc of origin, but is contained within peridural membrane or under a portion of posterior longitudinal ligament that is not intimately bound with the annulus of origin, the disc is considered sequestered. If the fragment is attached to the disc of origin by scar, or other non-discal tissue, or is merely in apposition to the disc of origin and not connected by disc tissue, it is considered sequestered. Sequestered and sequestered are used interchangeably.

SEQUESTRUM

Disc tissue that has become displaced from the disc space of origin and lacks any continuity with disc material within the disc space of origin. Syn: disc fragment. See: sequestered disc. Note: Sequestrum refers to the isolated fragment itself, whereas sequestered disc defines the condition of the disc.

SPONDYLITIS

Inflammatory disease of the spine, other than degenerative disease.

SPONDYLOSIS

Spondylosis deformans, for which spondylosis is a shortened form. 2. (Non-Standard) Any degenerative changes of the spine that include osteophytic enlargement of apophyseal bone. Note: Spondylosis deformans has specific characteristics that distinguish it from intervertebral osteochondrosis. Both processes include vertebral body osteophytes. The term "spondylosis" is often used in general as synonymous with "degeneration" which would include both processes, but such usage is confusing, so it is best that "degeneration" be the general term and "spondylosis deformans" a specifically defined sub-classification of degeneration. See: degeneration, intervertebral osteochondrosis, spondylosis deformans.

SPONDYLOSIS DEFORMANS

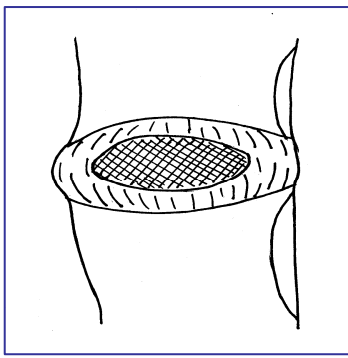
Degenerative process of the spine involving essentially the annulus fibrosus and characterized by anterior and lateral marginal osteophytes arising from the vertebral body apophyses, while the intervertebral disc height is normal or only slightly decreased. See: degeneration, spondylosis. vertebral body marrow changes (Modic's classification): Reactive vertebral body modifications associated with disc inflammation and degenerative disc disease, as seen on MR images. Type 1 refers to decreased signal intensity on T1-weighted spin-echo images and increased signal intensity on T2-weighted images, indicating bone marrow edema associated with acute or sub-acute inflammatory changes. Types 2 and 3 indicate chronic changes. Type 2 refers to increased signal intensity on T1-weighted images and isointense or increased signal intensity on T2-weighted images, indicating replacement of normal bone marrow by fat. Type 3 refers to decreased signal intensity on both T1 and T2-weighted images, indicating reactive osteosclerosis.

STENOSIS

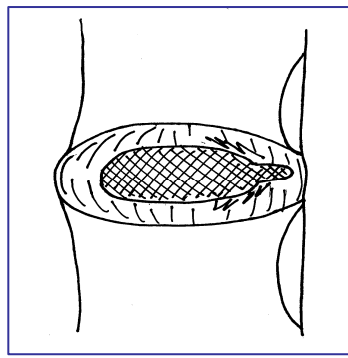
1. A stricture of any canal; 2. Narrowing of an opening or passageway in the body.

VERTEBRAL BODY MARROW CHANGES, MODIC'S CLASSIFICATION

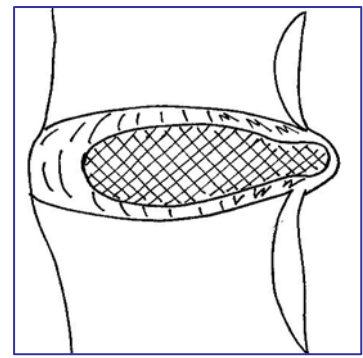
Reactive vertebral body modifications associated with disc inflammation and degenerative disc disease, as seen on MR images. Type 1 refers to decreased signal intensity on T1-weighted spin-echo images and increased signal intensity on T2-weighted images, indicating bone marrow edema associated with acute or sub-acute inflammatory changes. Types 2 and 3 indicate chronic changes. Type 2 refers to increased signal intensity on T1-weighted images and isointense or increased signal intensity on T2-weighted images, indicating replacement of normal bone marrow by fat. Type 3 refers to decreased signal intensity on both T1 and T2-weighted images, indicating reactive osteosclerosis.



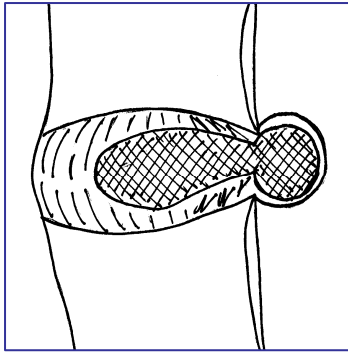
NORMAL



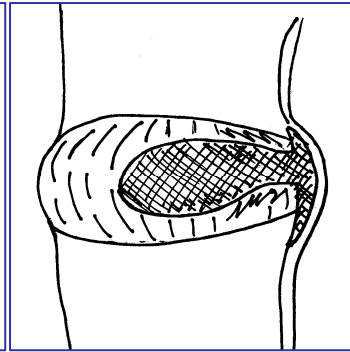
ANULAR TEAR



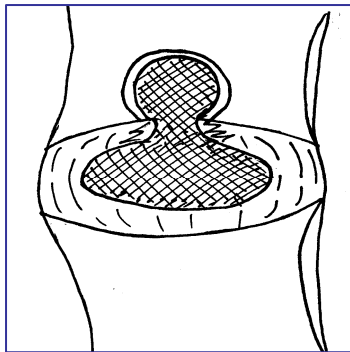
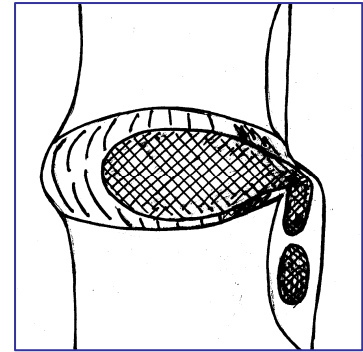
DISC PROTRUSION



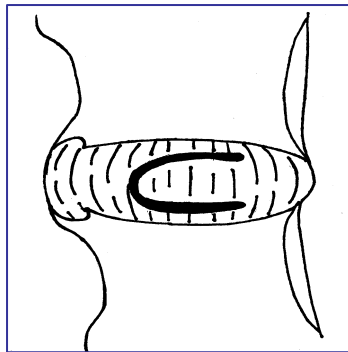
DISC EXTRUSION



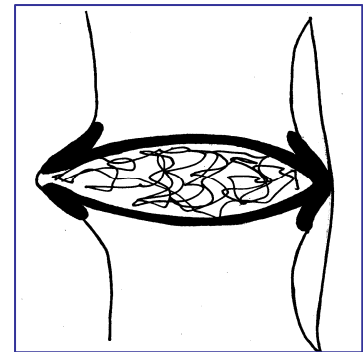
DISC EXTRUSION WITH SEQUESTRATION



INTRAVERTEBRAL HERNIATION



SPONDYLOSIS DEFORMANS



INTERVERTEBRAL OSTEOCHONDROSIS



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SOURCES: www.acr.org, www.asnr.org/spine_nomenclature,
www.radiologyinfo.org ; Stedman's Medical Dictionary 27th edition

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