



Intervertebral disc calcification of the spine in an elderly population: radiographic prevalence, location, and distribution and correlation with spinal degeneration

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**PURPOSE:** To determine the prevalence, distribution, and location of intervertebral disc calcification (IDC) in the thoracic and lumbar spine and the association of IDC with radiographically evident spinal degenerative changes in cadavers. **MATERIALS AND METHODS:** Anterior vertebral columns comprising T1 through L5 were removed from 223 cadavers (183 men, 40 women; mean age at death, 67 years; range, 37-94 years). Approximately 5-mm-thick parasagittal sections were investigated with high-contrast radiography. The presence of IDC, osteophytes, vertebral endplate abnormalities, and vacuum phenomena was recorded, and the height of disk space was measured at 3,568 intervertebral levels. Logistic regression analysis was performed. **RESULTS:** IDC was identified in 178 (80%) of the 223 cadavers. Of 3,568 disks, 459 (13%) had IDC, and 289 cases (63%) were located in the annulus fibrosus. IDC was most common in the lower thoracic spine, occurring in 275 (60%) of 459 disks. IDC occurred in 159 (87%) of 183 men and 19 (48%) of 40 women. Logistic regression analysis was adjusted for age, and results showed that the frequency of IDC was significantly higher in men in upper, middle, and lower segments of the thoracic spine ( $P < .05$ ) but not in the lumbar spine ( $P = .09$ ). IDC correlated with increasing age ( $P < .001$ ) and disk space loss ( $P < .001$ ) at all spinal levels. There was no association of IDC with vacuum phenomena or vertebral endplate abnormalities at any spinal level.

**CONCLUSION:** IDC is common in elderly persons, especially in the annulus fibrosus and lower thoracic spine. The prevalence of IDC increases with age and extent of disk space loss. Copyright RSNA, 2004

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