

Kümmell's disease: pathophysiology, diagnosis, treatment and the role of nuclear medicine. Rationale according to our experience

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Abstract

Kümmell's disease (KD) is a rare clinical entity and includes patients, who after a trivial trauma and an asymptomatic period, develop a progressive vertebral body collapse and a painful kyphosis. The main pathologic eliciting event still remains unclear. Vertebral body collapse can be the result of infection, malignant neoplasia or trauma. It may be difficult to distinguish among them, particularly in osteoporosis. To explain the time lag between initial trauma and vertebral collapse, the hypothesis of ischemic necrosis was suggested. Many authors considering KD as a case of mere vertebral osteonecrosis have wrongly reported cases of osteonecrosis without a spinal trauma, as KD. The fact that intravertebral vacuum cleft often coexists with vertebral osteonecrosis further added to confusion. Various imaging modalities including bone scan support the diagnosis of KD. It is described that bone single photon emission tomography (SPET) or SPET/computed tomography scintigraphy using dynamic and static, acquisition can identify the chronicity of the lesions.

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