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常规MRI鉴别诊断椎体转移瘤与良性压缩骨折

Differential diagnosis of benign vertebral compression fracture and spine metastasis on conventional MRI

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中文摘要:

目的 探讨常规MRI对鉴别诊断椎体转移瘤与椎体良性压缩骨折的价值。方法 回顾性分析58例144个椎体压缩骨折的临床MRI资料,其中良性压缩骨折36例92个椎体(外伤性10例14个椎体,非外伤性26例78个椎体),转移瘤所致骨折22例52个椎体,观察椎体形态、信号、椎体后缘形态、椎弓根形态及信号、椎间隙、椎旁软组织及强化表现。结果 良性压缩骨折在T1WI上40.21%(52/92)椎体呈低信号,T2WI上27.17%(25/92)椎体呈高信号;椎体转移瘤压缩骨折T1WI上92.31%(48/52)椎体呈低信号,在T2WI上96.15%(50/52)椎体呈高信号,增强扫描后呈明显强化。良性压缩骨折中楔形及凹形椎体分别占41.30%(38/92)和57.61%(52/92),41.30%(38/92)椎体后缘成角,13个椎体旁软组织肿块呈环形;椎体转移瘤压缩骨折中42.31%(22/52)椎体为倒楔形,圆隆状椎体后缘占73.08%(38/52),椎体椎弓根膨隆且T2WI均呈高信号占59.62%(31/52),25个椎体(48.08%)旁软组织肿块呈不规则结节状。结论 常规MRI征象有助于鉴别诊断椎体转移瘤与椎体良性压缩骨折。

英文摘要:

Objective To investigate the value of conventional MR imaging in the differentiation of benign vertebral compression fracture and spine metastasis. **Methods** One hundred and forty-four vertebral compressive fractures of 58 patients were retrospectively analyzed. There were 92 benign vertebral fractures in 36 patients, including 14 traumatic fractures of 10 patients, 78 nontraumatic fractures of 26 patients; 52 vertebal metastasis fractures of 22 patients. The following MRI features were observed: changes of vertebral shape and signal, vertebral posterior edge, the pedicle's shape and signal, intervertebral space, paravertebral soft tissue and enhancement pattern. **Results** The benign compression fractures showed hypointense signals in 40.21% (52/92) on T1WI and hyperintense signals in 92.31% (48/52) on T2WI. The vertebal metastasis fractures showed hypointense signals in 27.17% (25/92) on T1WI and hyperintense signals on T2WI in 96.15% (50/52) and strong enhancement after injection of Gd-DTPA. In addition, the benign fractures showed the wedge-shaped vertebral body in 41.30% (38/92), depressed vertebral body in 57.61% (52/92), angulation of posterior edge of the vertebra in 41.30% (38/92), ring shaped paravertebral soft tissue mass in 13 vertebral fractures; the malignant fractures showed the wedge-rear vertebral body in 42.31% (22/52), bulging of posterior edge of the vertebra in 73.08% (38/52), pedicle expansion and high signal intensity in T2WI in 59.62% (31/52) and anomal-nodosity paravertebral soft tissue mass in 25 (48.08%) vertebral fractures. **Conclusion** The conventional MRI findings of vertebral fractures are helpful to differentiation of benign and spine metastasis compression fractures.

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