

乳腺X线摄影检出的恶性微钙化在MR上的影像表现

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Title: MR imaging features of malignant microcalcifications detected by mammography

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摘要: 目的: 探讨乳腺X线摄影检出的恶性微钙化病变在MR上的影像表现。方法: 回顾性分析乳腺X线摄影上表现为微钙化且手术病理证实为乳腺癌的80例患者资料, 均行乳腺MR检查及X线引导下金属丝定位。分析其X线、MR表现及两者的关系。统计学采用卡方检验或Fisher's 精确检验。结果: 共83个病灶, 导管内癌45个, 浸润性癌38个。X线表现: 67个为单纯钙化, 16个钙化伴局部密度增高; 细小多形性(49个)及簇状分布(35个)是最常见的钙化形态及分布方式。MR表现: 非肿块样强化57个, 肿块样强化16个, 未见异常强化10个。92.9%(26/28)的段样分布钙化MR上表现为段样分布强化。段样分布钙化灶在MR上以段样分布强化更常见($P=0.000$)。81.3%(13/16)的肿块样强化见于簇状分布钙化。肿块样强化更多见于簇状分布的钙化灶($P=0.000$)。MR上假阴性钙化灶多见于簇状分布钙化灶, 但没有显著差异($P=0.061$)。结论: 恶性微钙化在MR上的强化类型以非肿块样强化常见, 少部分表现为肿块样强化。其强化表现与钙化在X线上的分布方式有关。

Abstract: Objective: To explore the imaging manifestations of breast microcalcifications and improve the MR diagnosis. Methods: Eighty patients with mammographically detected microcalcifications pathologically proven breast cancer who underwent breast MRI before surgical biopsy, were retrospectively analyzed. The imaging features of mammography and MR were analyzed and compared with χ^2 test or Fisher's exact test. Results: Of the 83 lesions, pathologic examination revealed 45 carcinoma in situ and 38 invasive carcinoma. Mammography showed pure microcalcifications in 67 lesions, calcifications with local asymmetry in 16 lesions. Fine pleomorphic morphology (49 cases) and grouped distribution (35 cases) were the most common appearance. MRI demonstrated 57 lesions with non-mass enhancement, 16 mass enhancement and 10 occult lesions. 92.9% (26/28) of segmental distribution calcifications showed segmental distribution enhancement on MR. Segmental distribution enhancement on MR was more common in segmental calcification ($P=0.000$). 81.3% (13/16) of mass enhancement was seen in clustered calcification. Mass enhancement was more common in clustered calcifications ($P=0.000$). False negativity on MR was mostly seen in clustered calcifications, but there was no significant difference ($P=0.061$). Conclusion: Malignant calcifications detected by mammography may have variable morphologic features on MR images, with non-mass enhancement morphology being the most common manifestation, mass enhancement less common. The enhancement morphology on MR was related to the distribution pattern of calcification on mammography.

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备注/Memo: -

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