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The role of MR imaging with HASTE (half fourier acquired single shot turbo spin echo) sequence in the diagnosis of lung lesions in comparison with multislice CT

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PURPOSE: This study was designed to compare the diagnostic values of MRI using Half Fourier Acquired Single Shot Turbo Spin Echo (HASTE) sequence and multidetector CT in patients with pathologically examined pulmonary lesions.
MATERIALS AND METHODS: 34 patients with pathologically examined pulmonary lesions were included in the study. Patients were divided into three groups and examined by both multidedector CT and MRI. During the MRI patients were not administered any intravenous contrast medium, ECG gating and breath holding were not performed in HASTE sequence. Pulmonary lesions were evaluated on the basis of their dimensions, numbers, differentiation from atelectasis and consolidation, invasion to the thoracic wall-mediastinal structures and presence of lymphadenopathies.
RESULTS: Sensitivity and specificity of CT and MRI were equal in the detectability of submilimetric nodules (50%). Sensitivity of CT was more significant in differentiation of the mass from atelectasis and consolidation (86.6%, p = 0.035). For the invasion of the mass to the mediastinal structures and the thoracic wall the sensitivity of MRI was more significant (86.6%, p = 0.035).
CONCLUSION: HASTE sequence can be used to determine the invasion of the pulmonary mass to the mediastinal structures and the thoracic wall since it is more sensitive than CT. It can also be used to detect submilimetric nodules, it has equal sensitivity and specificity compared to CT. But CT is superior for the differentiation of the mass from atelectasis and consolidation.
KEY WORDS (MESH WORDS) : MRI; Solitary Pulmonary Nodules; Pulmonary Neoplasms; Tomography