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学 位 論 文 要 旨

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<p>論 文 題 名</p> <p>Diagnostic Value of Fluid-Attenuated Inversion Recovery Magnetic Resonance Imaging for Multilocular Ameloblastoma (多房性エナメル上皮腫に対するMRI FLAIR法の診断的価値)</p>		
<p>論文内容の要旨 (2000字程度)</p> <p>Introduction: Ameloblastoma is one of the most common tumors in the jawbone and the multilocular type is most typical. Contrast-enhanced (CE)-MR image is useful to distinguish cystic and solid portions on multilocular lesion; however, CE-MR examination which uses Gadolinium (Gd) based contrast agent has potential complications in patients with kidney disease and asthma. Fluid-attenuated inversion recovery (FLAIR) is one of inversion recovery sequences with non-CE method which signal of fluid is suppressed. It is necessary to determine the clinical value of FLAIR in oral tumors.</p> <p>Objective: To investigate qualitatively and quantitatively whether FLAIR images are useful for detecting and differentiating cystic and solid portions of multilocular ameloblastomas.</p> <p>Materials and methods: We retrospectively reviewed 11 cases of multilocular ameloblastoma. FLAIR and short T1 inversion recovery (STIR) sequences were performed in all cases, CE-MR images in 10 cases, and T1-weighted images (T1WI) in 7 cases. All cases were examined using 3T MRI unit. Signal intensity of FLAIR, STIR, CE-MR, and T1WI images were visually evaluated (qualitative analysis). Signal-to-noise ratio (SNR) of cystic and solid portions were measured and compared among the images of all sequences and statistically analyzed (quantitative analysis).</p>		

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Result: FLAIR imaging could detect cystic portions with low signal intensity (SI) in all cases because cystic fluid was well suppressed on the images, and the solid portion showed intermediate SI. Shape and outline of FLAIR images on seven cases were similar with CE-MR images. On some STIR images, the solid portion was masked by the markedly high SI of the cystic portion. CE-T1WI and CE-FLAIR images showed no enhancement of the cystic portion but enhancement of the solid portion. On FLAIR, CE-T1WI and CE-FLAIR images, SNR of solid portion was significantly higher than SNR of cystic portion ($p < 0.05$).

Conclusion: Cystic and solid portions of a lesion could be detected and distinguished on FLAIR imaging. Shape and appearance of FLAIR images were similar with CE-MR images. FLAIR images are thus useful for diagnosing multilocular ameloblastoma when CE-MR cannot be performed.