嘉兴市第一医院论文投稿登记单

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论文名称	Quantitative differentiation of malignant and benign thyroid nodules with multi-parameter diffusion-weighted imaging
是否为基金或重点学科项目	是
项目名称(编号)	基于多模态磁共振成像技术定量评估甲状腺肿瘤的前瞻性研究(基于多模态磁共振成像技术定量评估甲状腺肿瘤的前瞻性研究)
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论文摘要

Abstract

Purpose: To determine the utility of multiparametric DWI including mono-exponential, biexponential, stretched exponential, and kurtosis models for the differentiation of thyroid lesions.

Methods: 79 patients (62 with benign and 17 with malignant nodules) underwent multi-b value DWI of the thyroid. Multiple DWI parameters were obtained for statistical analysis.

Results: Good agreement was found for diffusion parameters of thyroid nodules. Malignant lesions displayed lower diffusion parameters including ADC, D, f, DDC, α and Dapp, and higher Kapp than benign entities (all $P<0.01$), except for D* ($P>0.05$). The AUC of the ADC(0 and 1000) was not significantly different from that of the ADC(0 and 2000), ADC(0 to 2000), ADC(0 to 1000), D, DDC, Dapp and Kapp (all $P>0.05$) and was significantly higher than the AUC of D*, f and α (all $P<0.05$) for differentiating benign from malignant lesions.

Conclusion: Multiple DWI parameters including ADC, D, f, DDC, α, Dapp and Kapp could discriminate benign and malignant thyroid nodules. The metrics including D, DDC, Dapp and Kapp provide additional information with similar diagnostic performance of ADC, combination of these metrics may contribute to differentiate benign and malignant thyroid nodules. The ADC calculated with higher b values may not lead to improved diagnostic performance.

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