

论文

磁共振T2-mapping成像对膝关节早期骨关节炎的诊断价值

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摘要:

目的 分别测量同一年龄组膝关节早期骨关节炎(OA)患者和正常对照组关节软骨的T2弛豫时间并比较其差异性, 探讨磁共振T2-mapping成像对膝关节早期骨关节炎的诊断价值。方法 采用GE signa 3.0T磁共振扫描系统T2-mapping成像测量正常对照组(n=20)和轻度OA组(n=32)膝关节股骨内侧髁、外侧髁, 胫骨内侧髁、外侧髁4处软骨的T2值, 并对数据进行统计学分析。结果 正常对照组与轻度OA组关节软骨平均T2 值分别为(37.85±3.28)ms、(48.16±5.12) ms, 轻度OA组与正常对照组关节软骨T2值差异有统计学意义(P<0.05)。结论 磁共振T2-mapping成像通过量化分析关节软骨内组织成分的变化, 对早期OA的诊断和监测具有较高的临床应用价值。

关键词: 膝关节; 关节软骨; 骨关节炎; 磁共振成像; T2值

Diagnostic value of MR T2-mapping in early knee osteoarthritis

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Abstract:

Objective To measure T2 relaxation time of knee cartilage in patients with early knee osteoarthritis (OA) compared with healthy subjects of the same age group, and to evaluate the diagnostic value of the T2-mapping imaging in early knee osteoarthritis. Methods Quantitative T2-mapping of knee cartilage was evaluated with a 3.0T MR imaging spectrometer in 20 healthy subjects and 32 patients of mild OA. T2 values in four compartments of knee cartilage (condylus medialis and condylus lateralis femoris, condylus medialis and condylus lateralis tibiae) were measured in T2-mapping imaging. Statistical differences were analyzed. Results The average T2 relaxation in normal group and mild OA group was (37.85±3.28)ms and (48.16±5.12)ms respectively. There was a significant difference in T2 value between case group and control group(P<0.05). Conclusion T2-mapping imaging can indicate component abnormality in articular cartilage, and has a high clinical value in early diagnosis and surveillance of OA.

Keywords: Knee joint; Articular cartilage; Osteoarthritis; Magnetic resonance imaging; T2 value

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