

李思瑶, 何慧瑾, 冯晓源, 周碧婧. 磁敏感加权成像相位值评估阿尔茨海默病脑内铁沉积[J]. 中国医学影像技术, 2011, 27(4): 698-701

磁敏感加权成像相位值评估阿尔茨海默病脑内铁沉积

Evaluation on the changes of brain iron deposition in patients with Alzheimer disease using SWI phase value

投稿时间: 10/20/2010 最后修改时间: 12/21/2010

DOI:

中文关键词: [阿尔茨海默病](#) [神经退行性变](#) [脑铁积聚](#) [相位值](#)

英文关键词: [Alzheimer disease](#) [Neurodegeneration](#) [Brain iron accumulation](#) [Phase value](#)

基金项目: 卫生部卫生行业科研专项项目(200802099)。

作者	单位	E-mail
李思瑶	复旦大学附属华山医院放射科, 上海 200040	
何慧瑾	复旦大学附属华山医院放射科, 上海 200040	hehuijin@hotmail.com
冯晓源	复旦大学附属华山医院放射科, 上海 200040	
周碧婧	复旦大学附属华山医院放射科, 上海 200040	

摘要点击次数: 249

全文下载次数: 67

中文摘要:

目的 采用SWI技术观察阿尔茨海默病(AD)患者与正常对照组脑内铁含量的差异,并探讨相位值与MMSE评分的相关性。**方法** 对23例AD患者(AD组)及18名健康老年人(NC组)进行垂直于海马长轴的斜冠状SWI,扫描范围自双侧颞极至齿状核。在所得相位图上测量各脑区的相位值,并进行组间统计学分析,比较AD组各脑区相位值与MMSE评分的相关性。**结果** 与NC组相比,AD组双侧海马、苍白球、尾状核、黑质、右侧额叶皮质及左侧壳核相位值降低,差异有统计学意义($P<0.05$)。AD组左侧壳核的相位值与MMSE评分具有最高的相关性,相关系数为0.53,左侧海马的相位值与MMSE评分相关系数为0.44。**结论** 相位值可作为评价AD患者脑内铁沉积异常的敏感而有效的手段。左侧壳核相位值与AD疾病进展关系密切。

英文摘要:

Objective To investigate the difference of iron deposition in the brain between Alzheimer disease (AD) patients and healthy subjects with SWI, and to observe the correlation of phase values with MMSE scores in AD patients. **Methods** Totally 23 patients with AD (AD group), 18 age- and sex-matched normal controls (NC group) underwent SWI. Oblique coronal images perpendicular to the long axis of hippocampus were obtained ranging from bilateral temporal poles to dentate nuclei. The phase values of each ROI in two groups were evaluated and compared using nonparametric *Mann-Whitney U* test. Partial *Spearman* rank correlation coefficient controlled by the age-related bias was used to assess the correlation between phase values in each ROI and MMSE scores in AD group. **Results** The phase values of bilateral hippocampus (HP), globus pallidus (GP), caudate nucleus (CAU), substantia nigra (SN), right frontal cortex (FC) and left putmen (PUT) in AD group were significantly lower than those in control group ($P<0.05$). The phase values of the left PUT were most significantly correlated with the MMSE scores, with the correlation coefficient of 0.53. The correlation coefficient between the phase values of the left HP and the MMSE scores was 0.44. **Conclusion** Phase value is proved effective to measure regional iron changes in AD patients. The phase value of left PUT has close correlation with the progression of AD.

[查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)

关闭

您是第1272292位访问者

版权所有:《中国医学影像技术》编辑部

主管单位: 中国科学院 主办单位: 中国科学院声学研究所

地址: 北京市海淀区北四环西路21号大猷楼502室 邮政编码: 100190 电话: 010-82547901/2/3 传真: 010-82547903

京ICP备05042622号

本系统由北京勤云科技发展有限公司设计