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DWI联合动脉自旋标记及MRA评价脑梗死缺血半暗带

Pulsed arterial spin-labeling combined with DWI and MRA for evaluation of ischemic penumbra

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英文关键词:Arterial spin labeling Diffusion magnetic resonance imaging Ischemic penumbra

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中文摘要:

目的 观察DWI联合动脉自旋标记（ASL）、MRA评价急性脑梗死缺血半暗带（IP）的价值。方法 对40例发病时间在24 h内的急性脑梗死患者行常规MR、MRA、DWI及ASL检查，根据ASL灌注异常区面积与DWI信号异常区面积分为ASL>DWI组、ASL≈DWI组、ASL结果 ASL>DWI组（即IP患者）25例（25/40，62.50%），血管狭窄程度以0、1级为主；其病灶中心ADC值和rCBF信号强度值与IP区及健侧相比均显著下降（*P*<0.001），IP区ADC值与健侧相比未见明显下降（*P*=0.59），而rCBF较健侧下降明显（*P*<0.001）。ASL≈DWI组2例（2/40，5.00%），ASL结论 ASL技术能探查大面积急性脑梗死的灌注情况；联合应用DWI、ASL、MRA 有助于判断IP。

英文摘要:

Objective To observe the value of arterial spin-labeling (ASL) combined with DWI and MRA in identifying ischemic penumbra (IP) for patients with acute stroke. **Methods** Forty patients with infarction within 24 h were enrolled. All patients underwent ASL, DWI and MRA examination, and were classified into ASL>DWI group (IP group), ASL≈DWI group and ASLResults There were 25 cases in ASL>DWI group (25/40, 62.50%), among them steno-occlusion were mainly graded as 0 and 1. Significant differences were found between infarct core and IP areas, as well as contralateral on ADC and rCBF (*P*<0.001). The distinction of IP areas between ipsilateral and contralateral cerebral tissue had no statistical significance on ADC (*P*=0.59), whereas had significance on rCBF (*P*<0.001). There were 2 cases (2/40, 5.00%) in ASL≈DWI group and 4 cases (4/40, 10.00%) in ASLn=1), 1 (*n*=1) and 3 (*n*=4). **Conclusion** ASL can be used to evaluate perfusion status of large area acute stroke. ASL combined with DWI and MRA can be helpful to diagnosing IP.

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