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CT灌注成像评价急性自发性高血压脑出血患者的近期预后

Evaluation on recent prognosis of patients with acute spontaneous hypertension and intracerebral hemorrhage with CT perfusion

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英文关键词: [Cerebral hemorrhage](#) [Tomography, X-ray computed](#) [Perfusion imaging](#) [Prognosis](#)

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中文摘要:

目的 应用CT灌注成像(CTP)对急性自发性高血压出血性脑卒中(shICH)血肿周围脑血流动力学变化进行定量测量,评价脑血肿周围组织灌注参数改变与近期预后的相关性。方法 对26例临床及CT确诊的幕上shICH患者行CTP检查,自发病到灌注扫描的时间为8~19 h。以血肿最大层面为参照,测量血肿周围1 cm内及对侧镜像区脑血流量(CBF)、脑血容量(CBV)、平均通过时间(MTT),获得相对灌注参数值rCBF、rCBV、rMTT(患侧/健侧)。电话随访患者脑出血后1个月生活表现,并记录日常生活活动能力量表(BI)分值。结果 shICH血肿周围带CBV值为(1.61±1.53) ml/100 g、CBF值为(16.48±12.58)ml/(100 g·min),明显低于对侧镜像区($Z=-2.603$ 、 -4.178 , $P<0.05$);MTT值为(9.12±2.57)s,较对侧镜像区明显延长($t=4.747$, $P<0.05$)。血肿周围CBV、CBF值与BI相关($Z=-3.40$ 、 -2.98 , $P<0.01$),参数MTT、rCBF、rCBV、rMTT与近期预后无关($P>0.05$);ROC曲线下面积分别为0.897、0.848,且CBV界限值为1.24 ml/100 g时,敏感度66.67%,特异度为100%;CBF界限值为8.44 ml/(100 g·min)时,敏感度100%,特异度为72.70%。结论 CTP可预测shICH血肿患者近期预后,在一定范围内,血肿周围CBV、CBF值越大,提示预后越差。

英文摘要:

Objective To evaluate the relationship between CT perfusion parameters of the perihematoma brain tissue and the recent prognosis of patients with acute spontaneous hypertensive intracerebral hemorrhage (shICH). **Methods** Twenty-six patients with clinically and CT diagnosed acute supratentorial shICH received CTP within 8-19 h after the onset of symptoms. At the maximum level of the hematoma, cerebral blood flow (CBF), cerebral blood volume (CBV) and mean transit time (MTT) of perihematoma area (isodense within 1cm rim of perilesion area on plain CT) and contralateral mirrored hemisphere were measured, and rCBF, rCBV, rMTT were calculated (ipsilateral/contralateral). The results of 1-month following-up in accordance with daily living table (Barthel index, BI) by telephone were recorded. **Results** CBV, CBF and MTT value of perihematoma area was (1.61±1.53)ml/100 g, (16.48±12.58)ml/(100 g·min) and (9.12±2.57)s, respectively. Significantly decreased CBV, CBF and prolonged MTT in the perihematoma zone were observed against contralateral hemisphere ($Z_{CBV}=-2.603$, $Z_{CBF}=-4.178$, $t_{MTT}=4.747$, all $P<0.05$). Perihematoma absolute values of CBV and CBF were indicative of recent prognosis ($Z=-3.40$, -2.98 , both $P<0.01$), while no correlation of MTT, rCBF, rCBV, rMTT with recent prognosis was noticed (all $P>0.05$). The area under the curve (AUC) was 0.897, 0.848, respectively. Taking perihematoma CBV of 1.24 ml/100 g as the threshold value, the sensitivity was 66.67% and the specificity was 100%, while taking CBF of 8.44 ml/(100 g·min) as the threshold value, the sensitivity was 100% and the specificity was 72.70%. **Conclusion** CTP can indicate the recent prognosis of acute shICH patients. Within a certain range, the recent prognosis declines with the increase of CBV and CBF value.

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