

## 胰腺炎专题研究

### 急性胰腺炎螺旋CT灌注参数与生化指标的相关性研究

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#### 摘要:

目的: 探讨多排螺旋CT灌注成像对急性胰腺炎(AP)的诊断价值。方法: 采用64排螺旋CT对86例AP患者行CT灌注成像检查, 根据Balthazar分级将患者分为5组, 比较各组血流量(BF)、血容量(BV)、平均通过时间(MTT)、表面管通透性(PS)等灌注参数, 以及血尿淀粉酶(AMY)、C反应蛋白(CRP)、血细胞比容(HCT)等临床生化指标的差异, 并将各灌注参数与各临床生化指标进行相关性分析。结果: 在AP患者中, BF与BV值随Balthazar分级增高而逐渐下降, 且重症AP患者BF与BV值明显低于轻症AP患者( $P=0.013, 0.025$ ), 而MTT及PS值变化趋势不明显(均 $P>0.05$ ); 血尿淀粉酶在病程早期升高, 进展为重症AP时开始下降, 而CRP与HCT值随Balthazar分级增高呈逐渐升高趋势, 且各组间比较差异均有统计学意义(均 $P<0.05$ )。相关性分析显示, AP患者BF, BV与HCT明显负相关( $r=-0.515, r=-0.624$ , 均 $P<0.05$ )。结论: 灌注参数BF, BV与生化指标HCT具有相关性, 故螺旋CT灌注扫描对AP的诊断和严重程度的判断具有一定的价值。

关键词: 胰腺炎/放射摄影术; 体层摄影术 螺旋计算机; 灌注成像

### Correlations of spiral CT perfusion indexes with biochemical parameters in patients with acute pancreatitis

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#### Abstract:

Objective: To evaluate the diagnostic value of multi-slice spiral CT perfusion imaging for acute pancreatitis (AP). Methods: Eighty-six AP patients were divided into 5 groups according to the Balthazar scoring system after 64-slice spiral CT perfusion imaging examination. The CT perfusion indexes including blood flow (BF), blood volume (BV), mean transit time (MTT) and permeability-surface area product (PS), as well as the clinical biochemical parameters including serum and urine amylase (AMY) level, C-reactive protein (CRP) and hematocrit (HCT) among the groups were compared, and the correlation analyses between the perfusion indexes and clinical biochemical parameters were also performed. Results: Among the AP patients, both BF and BV values were decreased as the Balthazar score increased, and both values were significantly lower in severe AP patients than those in mild AP patients ( $P=0.013$  and  $0.025$ ); the serum and urine AMY levels were increased at the early stage, but gradually decreased in the advanced stage of the disease, while CRP and HCT levels showed a continued increasing trend with increase in Balthazar score, and all the differences between groups had statistical significance (all  $P<0.05$ ). Correlation analyses revealed that either BF or BV value had a significant negative correlation with HCT value in AP patients ( $r = -0.515$  and  $-0.624$ , both  $P<0.05$ ). Conclusion: The perfusion indexes BF and BV have correlation with biochemical parameter HCT, thus, spiral CT perfusion scanning has a certain value for diagnosis and severity grading of AP.

Keywords: Pancreatitis/radiography, Tomography, Spiral Computed Perfusion Imaging

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