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## CT灌注成像评价甲状腺病变

### Multi-slice CT perfusion imaging evaluation of thyroid diseases

#### DOI:

中文关键词: [甲状腺疾病](#) [体层摄影术](#) [X线计算机](#) [灌注成像](#)

英文关键词: [Thyroid diseases](#) [Tomography, X-ray computed](#) [Perfusion imaging](#)

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#### 中文摘要:

目的 探讨多排螺旋CT灌注成像(MSCTPI)在甲状腺占位性病诊断和鉴别诊断中的临床应用价值。方法 43例符合入选标准的病例,分为良性组33例和恶性组10例,良性组包括结节性甲状腺肿亚组(17例)和甲状腺腺瘤亚组(16例),恶性组为甲状腺癌10例。采用GE LightSpeed 16排螺旋CT,常规CT平扫后动态增强扫描;绘制颈总动脉、甲状腺良性病变和甲状腺癌的时间-密度曲线(TDC),并计算各组BF、BV、MTT、PS值。对灌注参数各指标进行统计学分析。结果 颈总动脉TDC为单峰型,良性组的TDC表现为速升-缓降的小峰,恶性组TDC可分为基线段、上升段、下降段和水平段。良性组与恶性组间比较,BV、BF、MTT、PS值差异均有统计学意义( $P=0.001$ 、 $<0.001$ 、 $0.003$ 、 $<0.001$ );BV值和MTT值良性组各亚组与甲状腺癌组比较差异无统计学意义( $P$ 均 $>0.05$ );BF值良性组各亚组与甲状腺癌组比较差异有统计学意义( $P$ 均 $<0.05$ );PS值恶性组与结节性甲状腺肿组差异有统计学意义( $P<0.05$ )。良性结节甲状腺肿组与甲状腺腺瘤组在BF、BV、MTT、PS值比较差异均无统计学意义。结论 MSCTPI可准确反映甲状腺病变的血流特点;分析灌注参数BF、BV、MTT及PS值有利于鉴别诊断甲状腺良恶性病变。

#### 英文摘要:

Objective To explore the clinical value of multi-slice CT enhancement perfusion imaging (MSCTPI) in diagnosis and differential diagnosis of thyroid disease. **Methods** Thirty-three patients with benign thyroid diseases were enrolled in the benign group, and were divided into subgroups of nodular goiter ( $n=17$ ) and thyroid adenoma ( $n=16$ ), while 10 patients with thyroid carcinoma were enrolled in the malignant group. All patients underwent routine CT scanning and MSCTPI with GE LightSpeed 16-detector row CT scanner. Time-density curve (TDC) of common carotid for benign thyroid diseases and thyroid carcinoma was depicted. Perfusion parameters of blood flow (BF), blood volume (BV), mean transit time (MTT) and permeability surface area product (PS) were obtained automatically. All parameters were statistically analyzed among groups. **Results** TDC showed single peak in common carotid artery, with small peak of speed up and slow down in benign group, while with baseline segment, up above, down segment and horizontal segment in thyroid carcinoma. There was statistical difference between benign and malignant groups in BF, BV, MTT and PS value ( $P=0.001$ ,  $<0.001$ ,  $0.003$  and  $<0.001$ , respectively). No significant difference of BV and MTT was found between subunits of benign and thyroid carcinoma (all  $P>0.05$ ). BF was significantly different in benign and malignant groups ( $P<0.05$ ), whereas PS in thyroid carcinoma and nodular goiter was significant different ( $P<0.05$ ). No statistical difference of BF, BV, MTT and PS was detected between nodular goiter and thyroid adenoma. **Conclusion** MSCTPI can exactly show the blood flow features of thyroid. The analysis of BF, BV, MTT and PS is helpful for differential diagnosis between benign thyroid disease and thyroid carcinoma.

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