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64层螺旋CT增强扫描评价肾功能

Assessment of renal function using enhanced 64-slice spiral CT

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中文摘要:

目的 探讨利用64层螺旋CT增强扫描评价肾功能的可行性。方法 回顾性分析接受泌尿系统螺旋CT增强扫描的150例患者,将其分为女性≤50岁组、女性>50岁组、男性≤50岁组、男性>50岁组4组,测量动脉期双侧肾门水平肾脏外侧肾皮质CT值并求和(以下简称CT值),将所得结果与同期实验室方法测定的肌酐值进行相关性分析,同时分析肌酐正常者与升高者间CT值是否存在差异。结果 4组CT值与肌酐均呈负相关。女性≤50岁组:r=-0.43(P<0.05),女性>50岁组:r=-0.57(P<0.05),女性肌酐正常者平均CT值为(339.5±72.6)HU,升高者平均CT值为(235.1±66.5)HU(P<0.05)。男性≤50岁组:r=-0.53(P<0.05),男性>50岁组:r=-0.43(P<0.05),男性肌酐正常者平均CT值为(314.5±59.9)HU,升高者平均CT值为(255.1±63.7)HU(P<0.05)。结论 通过测量肾皮质动脉期CT值对肾功能进行评价是可行的;肾功能受损者肾皮质动脉期强化CT值降低。

英文摘要:

Objective To explore the feasibility of evaluating renal function by using enhanced 64-slice spiral CT. **Methods** A total of 150 patients who underwent multi-slice CT urography were analyzed retrospectively. The patients were divided into 4 groups: Female ≤50 years-old group, female >50 years-old group, male ≤50 years-old group and male >50 years-old group. CT Values of the outer edge of renal cortex at the level of renal hilum on both sides during the arterial phase were added (hereafter referred to as CT Value). The correlation of CT Values and laboratory creatinine values measured at the same time was assessed, and the differences between CT values of the ones with normal and increased creatinine were analyzed. **Results** CT values and creatinine values of all 4 groups had negative correlation. The correlation coefficient of female ≤50 years-old group was -0.43 (P<0.05), of female >50 years-old group was -0.57 (P<0.05). The average CT value of normal creatinine subjects was (339.5±72.6)HU, and the average CT value of increased creatinine subjects was (235.1±66.5)HU (P<0.05). The correlation coefficient of male ≤50 years-old group was -0.53 (P<0.05), of male >50 years-old group was -0.43 (P<0.05). The average CT value of normal creatinine subjects was (314.5±59.9)HU, and the average CT value of increased creatinine subjects was (255.1±63.7)HU (P<0.05). **Conclusion** It is feasible to assess renal function by measuring CT values of renal cortex during the arterial phase. CT values of the renal cortex decrease in patients with renal dysfunction during the arterial phase.

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