PET/CT心肌灌注显像联合冠状动脉CTA诊断冠心病

Evaluation of PET/CT myocardial perfusion imaging combined with coronary CTA in diagnosis of coronary heart disease

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中文摘要：

　　目的　评价PET/CT心肌灌注显像(MPI)联合冠状动脉CTA(CTCA)诊断冠心病的准确性。方法　检索2001-2011年有关PET/CTCA诊断冠心病的原始研究,经过质量评价后对符合纳入标准的文献进行数据提取,并行Meta分析和亚组分析,绘制森林图和拟合ROC曲线。结果　纳入6篇文献(252例),按照随机效应模型合并后,MPI/CTCA、单独MPI和单独CTCA(段)的诊断敏感度(SEN)、特异度(SPE)、阳性预测值(PPV)、阴性预测值(NPV)、诊断比值比(DOR)、诊断准确率(ACC)及曲线下面积(AUC)分别为0.91(95%CI 0.84~0.96)、0.91(95%CI 0.84~0.96)和0.87(95%CI 0.80~0.92),0.99(95%CI 0.96~1.00)、0.91(95%CI 0.84~0.96)和0.91(95%CI 0.88~0.94),0.95(95%CI 0.82~1.00)、0.94(0.86~1.00)和0.85(0.59~0.92),0.93(0.88~0.99)、0.84(0.78~0.97)和0.91(0.69~1.00),381.23(95%CI 98.04~1482.48)、113.20(95%CI 36.39~352.19)和73.59(95%CI 35.70~151.69),0.9671、0.9638和0.9575。结论　MPI/CTCA较单独MPI或单独CTCA无绝对优势,但鉴别冠状动脉痉挛所致MPI假阳性与代偿期冠状动脉狭窄所致MPI假阴性优势互补。

英文摘要：

　　Objective To evaluate the diagnosis accuracy of PET/CT myocardial perfusion imaging (MPI) combined with CT coronary angiography (CTCA) in diagnosis of coronary artery disease. **Methods** Online database were searched from 2001 to 2011 for all that concerned of PET/CTCA according to the strict search strategy. Data in eligible literature were extracted and put in the fourfold table after quality evaluation for Meta analysis and subgroup analysis. Then the forest plot and SROC curve were mapped. **Results** Six articles (totally 252 cases) were included. After Meta analysis with random effects model, diagnostic sensitivity (SEN), specificity (SPE), positive predictive value (PPV), negative predictive value (NPV), pooled diagnostic odds ratio (DOR), accuracy (ACC) and area under the curve (AUC) of MPI/CTCA, separate MPI and separate CTCA were 0.91 (95%CI 0.84-0.96), 0.91 (95%CI 0.84-0.96) and 0.87 (95%CI 0.80-0.92); 0.99 (95%CI 0.96-1.00), 0.91 (95%CI 0.84-0.96) and 0.91 (95%CI 0.88-0.94); 0.95(95%CI 0.82-1.00), 0.94 (0.86-1.00) and 0.85 (0.59-0.92); 0.93 (0.88-0.99), 0.84 (0.78-0.97) and 0.91 (0.69-1.00); 381.23 (95%CI 98.04-1482.48), 113.20 (95%CI 36.39-352.19) and 73.59 (95%CI 35.70-151.69); 0.9671, 0.9638 and 0.9575, respectively. **Conclusion** PET MPI/CTCA has no absolute advantage than MPI or CTCA alone in diagnosing coronary artery disease, but may be applied in identification of individual MPI false-positive caused by coronary artery spasm and false-negative lesions caused by compensatory stage coronary stenosis.

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