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PET/CT双定量分析在良恶性颈部淋巴结鉴别诊断中的价值

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The Diagnostic Value of Double Quantitative Analysis for Benign and Malignant Cervical Lymph Nodes by PET/CT

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摘要 探讨18F-FDG PET/CT SUVmax及CT短径双定量分析在良恶性颈部淋巴结鉴别诊断中的价值。方法: 回顾性分析本院2005年4月~2011年9月期间以颈部淋巴结肿大为首发症状行18F-FDG PET/CT检查的82例患者的显像情况。以病理诊断为金标准, 对CT、PET、PET/CT图像结果进行定量分析, 绘制SUVmax值及CT短径的ROC曲线, 找到最佳诊断界点, 分别计算单纯CT、单纯PET以及PET/CT双定量分析的敏感度、特异度、阳性预测值、阴性预测值、准确度等指标, 并对其结果进行统计学分析。结果: 当CT短径 $\geq 0.65\text{cm}$ 且 $\text{SUVmax} \geq 1.95$, 18F-FDG PET/CT显像诊断良恶性颈部淋巴结的灵敏度、特异度、阳性预测值、阴性预测值、准确度分别为79.30%、94.52%、95.15%、77.09%、85.76%, 其准确度高于单纯PET或单纯CT。结论: 18F-FDG PET/CT双定量分析对良恶性颈部淋巴结的鉴别诊断具有较高的临床价值, 其准确性优于单纯PET或单纯CT; 当CT短径 $\geq 0.65\text{cm}$ 且 $\text{SUVmax} \geq 1.95$, 提示颈部淋巴结恶性可能性大。

关键词: 颈部淋巴结 双定量分析 18F-FDG PET/CT CT

Abstract: To explore the diagnostic value of double quantitative analysis for benign and malignant cervical lymph nodes by PET / CT. **Methods:** A total of 82 patients with lymphadenectasis of the neck were enrolled in this retrospective study. They were examined by 18F-FDG PET / CT during the period between April 2005 and September 2011. CT, PET, and the combined PET / CT images of the patients were respectively reviewed. Pathological diagnosis was used as the gold standard, and data of the maximum standard uptake value (SUVmax) and information for CT short diameter in the cervical lymph nodes were analyzed. The receiver operating curves curve based on the SUVmax and short diameter data of cervical lymph nodes was performed to find the most accurate cut-off point. The sensitivity, specificity, positive and negative predictive values, and accuracy of CT, PET, and PET / CT were calculated, respectively. Statistical analysis of the results was performed. **Results:** When a cervical lymph node with a short diameter of $\geq 0.65\text{ cm}$ and SUVmax of ≥ 1.95 was diagnosed as malignant, the sensitivity, specificity, positive predictive value, negative predictive value, and accuracy of 18F-FDG PET / CT were 79.30 %, 94.52 %, 95.15 %, 77.09 %, and 85.76 %, respectively, in detecting the benign and malignant cervical lymph nodes. The accuracy of PET / CT was significantly better compared with that of CT or PET scans in determining benign and malignant cervical lymph nodes. **Conclusion:** The accuracy of PET / CT is better than that of CT or PET in diagnosing the benign or malignant cervical lymph nodes. If a cervical lymph node has a short diameter of $\geq 0.65\text{ cm}$ and a SUVmax of ≥ 1.95 , it can be possibly diagnosed as the malignant lesion.

Key words:

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