非霍奇金淋巴瘤中侵袭性淋巴瘤和惰性淋巴瘤的18F-FDG PET/CT显像特征

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Title: 18F-FDG PET/CT imaging features of invasive lymphoma and indolent lymphoma in non-Hodgkin' s lymphoma

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摘要: 目的：分析非霍奇金淋巴瘤（non-Hodgkin's lymphoma，NHL）中侵袭性淋巴瘤和惰性淋巴瘤的临床病理参数和18F-FDG PET/CT代谢参数的差异，探讨18F-FDG PET/CT代谢参数对预测侵袭性和惰性淋巴瘤的价值。方法：回顾性分析2011年9月至2016年12月于哈尔滨医科大学附属肿瘤医院行18F-FDG PET/CT检查的66例淋巴瘤患者，记录患者的年龄、性别、是否发热、浅表及深部淋巴结受侵、结外侵犯、临床分期及PET/CT代谢参数［包括：最大标准化摄取值（maximum standardized uptake value，SUVmax）、肿瘤/纵隔血池比值（tumor SUVmax value/mediastinal SUVmax value，T/MB）、总糖酵解量（total lesion glycolysis，TLG）、肿瘤代谢体积（metabolic tumor volume，MTV）］，分析以上各因素在侵袭性淋巴瘤与惰性淋巴瘤之间的差异，绘制PET/CT代谢参数诊断侵袭性淋巴瘤和惰性淋巴瘤的ROC曲线，并计算诊断效能。结果：侵袭性淋巴瘤和惰性淋巴瘤的年龄、性别、发热、浅表淋巴结侵犯、临床分期无统计学差异（P>0.05），而二者的深部淋巴结侵犯、结外受侵存在统计学差异（P<0.05）。侵袭性淋巴瘤的SUVmax、T/MB、TLG较惰性淋巴瘤高（P<0.05）。ROC曲线统计结果表明，SUVmax、T/MB、TLG分别以11.49、3.45、29.44为截断点时诊断侵袭性和惰性淋巴瘤的效能最佳，灵敏度分别为75%、80.4%、67.9%；特异度分别为90%、90%、70%。结论：侵袭性淋巴瘤的SUVmax、T/MB和TLG显著高于惰性淋巴瘤，在分析诊断淋巴瘤侵袭性时，18F-FDG PET/CT各参数具有重要参考价值，可为临床决策提供依据。

Abstract: Objective：To analyze the clinicopathologic parameters and 18F-FDG PET/CT metabolic parameters of invasive lymphoma and indolent lymphoma and to discuss 18F-FDG PET/CT metabolic parameters' value in predicting invasive lymphoma and indolent lymphoma.Methods：A retrospective analysis was made on sixty-six lymphoma patients who underwent 18F-FDG PET/CT examination in Harbin Medical University Cancer Hospital from September 2011 to December 2016.The age，gender，fever，superficial and deep lymph nodes involvement，external organs invasion，Ann Arbor stage and PET /CT parameters such as maximum standardized uptake value（SUVmax），tumor SUVmax value/mediastinal SUVmax value（T/MB），total lesion glycolysis（TLG）and metabolic tumor volume（MTV） were recorded.The statistically analysis was used to discuss the differences of the above factors between the invasive lymphoma and indolent lymphoma，and draw ROC curve to explore PET /CT parameters' efficacy in diagnosing invasive lymphoma and indolent lymphoma.Results：The results showed that there was no difference in age，gender，presence of fever，superficial lymph nodes involvement and stage between the invasive lymphoma and indolent lymphoma（P>0.05），but there was significant difference in the involvement of deep lymph nodes and external organs（P<0.05）.Invasive lymphoma had higher SUVmax，T/MB and TLG than indolent lymphoma(P<0.05).The ROC curve showed that SUVmax，T/MB and TLG had the best efficacy in the diagnosis of the invasive lymphoma and indolent

lymphoma with the cut-off points of 11.49，3.45 and 29.44，respectively.The sensitivity of the diagnosis was 75%，80.4%，and 67.9%，respectively，and the specificity was 90%，90%，and 70%，respectively.Conclusion：The SUVmax，T/MB and TLG of invasive lymphoma were significantly higher than those of indolent lymphoma.18F-FDG PET/CT parameters have important reference value in the analysis of lymphoma invasiveness and can provide basis for clinical decision-making.

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