

初诊多发性骨髓瘤患者血液炎症指标与预后的相关性分析

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Title: Analysis of prognostic relationship between blood inflammatory index and newly-diagnosed multiple myeloma patients

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关键词: 中性粒细胞与淋巴细胞比值; 血小板与淋巴细胞比值; 多发性骨髓瘤; 预后

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摘要: 目的: 探讨外周血中性粒细胞与淋巴细胞比值 (NLR) 和血小板与淋巴细胞比值 (PLR) 在多发性骨髓瘤 (MM) 患者预后判断中的价值。方法: 收集107例初诊为MM患者治疗前的NLR和PLR及其各项临床指标。根据患者的中位NLR计数及中位PLR计数分组, 利用 χ^2 检验比较组间差异, Kaplan-Meier法及Log-rank法检验计算生存率, 采用Cox比例风险模型对影响患者预后的因素进行分析。结果: 根据中位NLR值及PLR值将其分为高NLR组 (> 2.54) 及低NLR组 (≤ 2.54)、高PLR组 (> 135) 及低PLR组 (≤ 135)。高NLR组及高PLR组的临床分期、 β_2 -微球蛋白、血清肌酐水平与低水平组的组间差异具有统计学意义 ($P < 0.05$), 高NLR组的血清乳酸脱氢酶水平高于低NLR组 ($P < 0.05$)。Cox单因素及多因素分析结果显示, 初诊MM患者外周血NLR > 2.54 是影响预后的独立危险因素 ($P < 0.05$), 而PLR > 135 是MM患者预后的危险因素之一, 但并非独立危险因素。结论: NLR及PLR可能成为MM患者预后判断指标, 治疗前高外周血NLR及PLR计数的MM患者提示预后不良。

Abstract: Objective: To explore the prognostic value of neutrophil-to-lymphocyte ratio (NLR) and platelet-to-lymphocyte ratio (PLR) of peripheral blood in patients with multiple myeloma. Methods: We selected 107 patients with newly diagnosed multiple myeloma to analyze the prognostic effects of NLR and PLR. All patients were grouped according to the median NLR and PLR. The differences between groups were compared using chi-square test. The survival was calculated by Kaplan-Meier analysis and Log-rank test, Cox regression was used to analyze the factors which affect the survival of the patients. Results: The patients were divided into high NLR group (NLR > 2.54) and low NLR group (NLR ≤ 2.54), high PLR group (PLR > 135) and low PLR group (PLR ≤ 135) by median NLR and PLR. The clinical stage, β_2 -MG and renal function level of the high NLR and PLR group was statistically significant different to the low one ($P < 0.05$). Lactate dehydrogenase in high NLR group were higher than those in low NLR group ($P < 0.05$). Cox univariate and multivariate analysis showed NLR > 2.54 was an independent risk factor for the newly-diagnosed multiple Myeloma. PLR > 135 was a risk factor, but not an independent risk factor. Conclusion: NLR and PLR may be the prognostic indicators for multiple myeloma patients, patients with high peripheral blood NLR and PLR before treatment indicate poor prognosis.

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