

论著
慢性阻塞性肺疾病患者血清CRP和IL-18与肺功能及生活质量的相关性

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摘要:

目的: 初步探讨慢性阻塞性肺疾病(chronic obstructive pulmonary disease,COPD)患者血清C-反应蛋白(C-reactive protein,CRP)和白介素-18(interleukin-18,IL-18)的水平与肺功能及生活质量的关系及St George's呼吸问卷(George's respiratory questionnaire,SGRQ)在临床应用中的价值。方法: 同步收集湘雅二医院2008年10月至2009年3月COPD急性加重期(AECOPD组)患者39例,COPD稳定期(COPD组)患者21例和健康对照者(对照组)22例空腹静脉血,分别用Immage特定蛋白分析仪及酶联免疫吸附实验法测定血清中CRP和IL-18的浓度,并对COPD患者进行肺功能检查及用SGRQ对所有受试者进行生活质量评分。结果: AECOPD组血清CRP和IL-18水平及SGRQ分值均显著高于COPD组和对照组(均 $P<0.01$),COPD组上述指标均较对照组为高($P<0.01$)。AECOPD组和COPD组患者血清CRP和IL-18均与第1秒用力呼气容积(forced expiratory volume in one second, FEV1)/最大用力肺活量(forced vital capacity, FVC)和FEV1%呈负相关,SGRQ分值均与FEV1%,FEV1/FVC呈负相关,血清CRP和IL-18均与SGRQ分值呈正相关。结论: 血清CRP及IL-18参与了COPD的炎症反应,可作为判断COPD急性加重期的指标;二者可能与COPD患者的肺功能损伤及生活质量下降有关;SGRQ是评价COPD患者生活质量有效、敏感、可行的方法,值得推广。

关键词: 慢性阻塞性肺疾病 C-反应蛋白 白介素-18 生活质量 肺功能

Correlation among the levels of C-reactive protein and interleukin-18, quality of life, and lung function in patients with chronic obstructive pulmonary disease

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Abstract:

Objective To determine the correlation among the levels of C-reactive protein (CRP) and interleukin-18 (IL-18), quality of life, and pulmonary function in patients with chronic obstructive pulmonary disease (COPD),and to evaluate George's respiratory questionnaire (SGRQ). Methods From October 2008 to March 2009, 39 patients with an acute exacerbation COPD (the AECOPD group), 21 patients with stable COPD (the COPD group), and 22 normal people (the control group) were enrolled in our study. The serum CRP level was measured with Beckman Coulter Immage and the IL-18 level was measured by ELISA. All subjects completed the SGRQ assessment and all patients with COPD accepted pulmonary function test.Results The serum levels of CRP and IL-18, and SGRQ scores in the AECOPD group were significant1y higher than those in the COPD group and the control group ($P<0.01$). The serum levels of CRP and IL-18 and SGRQ scores in the COPD group were significant1y higher than those in the control group ($P<0.01$). The serum levels of CRP and IL-18 in the AECOPD group and the COPD group were negatively correlated with FEV1% and forced expiratory volume in one second (FEV1)/forced vital capacity (FVC). SGRQ scores in the AECOPD group and the COPD group were negatively correlated with FEV1% and FEV1/FVC. The serum levels of CRP, IL-18 in the AECOPD group and the COPD group were positively correlated with SGRQ scores. Conclusion CRP and IL-18 are involved in the process of inflammatory reaction of COPD, which could be markers of the acute exacerbation period of COPD. The serum levels of CRP and IL-18 might be related to the lung dysfunction and the lower quality of life in the patients with COPD. SGRQ is an effective, susceptible, and feasible method to evaluate the quality of life in patients with COPD.

Keywords: chronic obstructive pulmonary disease C-reactive protein interleukin-18 quality of life lung function

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