

论著

哮喘患者痰中IL-18、IL-16、IL-8、嗜酸性粒细胞趋化因子水平和类糜蛋白酶活性的测定

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摘要 目的: 探讨哮喘患者IL-18、IL-16、IL-8、嗜酸性粒细胞趋化因子(eotaxin)的水平和类糜蛋白酶(chymase)活性。方法: 采用夹心ELISA法检测痰中IL-18、IL-16、IL-8、eotaxin水平。Chymase活性测定: 使用琥珀酰-丙氨酸-丙氨酸-脯氨酸-苯丙氨酸-硝基酰苯胺(SAAPP)作底物, 采用酶标仪以410 nm波长连续监测吸光度的变化。结果: Chymase活性测定: 12/32 (37.5%)的哮喘患者痰液中水解SAAPP的酶活性高于对照组, 类糜蛋白酶抑制剂SBTI、 α 1-AT可分别抑制这种酶活性的71.9%和72.1%; 急性期哮喘患者痰中IL-18、IL-16、IL-8和eotaxin值均高于对照组; 相关性分析表明IL-8与IL-16($r=0.55, P<0.05$)和eotaxin($r=0.41, P<0.05$)之间存在弱正相关; IL-18与IL-16之间存在显著正相关($r=0.64, P<0.01$); IL-18与IL-16均与eotaxin有显著正相关(r 分别为0.66和0.64, $P<0.01$); eotaxin、IL-18、IL-16、IL-8与嗜中性粒细胞、上皮细胞、淋巴细胞和巨噬细胞均无明显相关性。结论: 哮喘患者痰液中IL-18、IL-16、IL-8、eotaxin水平及chymase活性增高, 表明它们在哮喘发病机制中可能起到一定的作用。

关键词 [类糜蛋白酶](#); [白细胞介素18](#); [白细胞介素16](#); [白细胞介素8](#); [趋化因子](#); [嗜酸细胞](#); [哮喘](#); [肥大细胞](#)

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Levels of IL-18, IL-16, IL-8, eotaxin and the chymase activity in the sputum of asthmatics

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Abstract

AIM: To investigate the levels of IL-18, IL-16, IL-8, eotaxin and the chymase activity in the sputum of asthmatics. METHODS: IL-18, IL-16, IL-8 and eotaxin levels were detected with sandwich ELISA procedures and chymase activity was determined spectrophotometrically (410 nm) by the rate of hydrolysis of N-succinyl-L-Ala-L-Ala-L-Pro-L-Phe-p-nitroanilide (SAAPP). RESULTS: The specific chymase activities in the severe and moderate asthmatics were higher than that in controls. Native protease inhibitors α 1-antitrypsin (α 1-AT) and soybean trypsin inhibitor (SBTI) inhibited 71.9% and 72.1% enzymatic chymase activity, respectively. The levels of IL-18, IL-16, IL-8 and eotaxin were significantly elevated in the sputum of patients with acute asthma. There were correlations between the levels of IL-8 and IL-16 ($r=0.55, P<0.05$), IL-8 and eotaxin ($r=0.41, P<0.05$), IL-18 and IL-16 ($r=0.64, P<0.01$), IL-18 and eotaxin ($r=0.66, P<0.01$), IL-16 and eotaxin ($r=0.64, P<0.01$), but they all failed to correlate with neutrophils, epithelial cells, lymphocytes and macrophages. CONCLUSION: The levels of IL-18, IL-16, IL-8, eotaxin and the activity of chymase were elevated in the sputum of the patients with asthma, indicating that they may play a role in the pathogenesis of asthma.

Key words [Chymase](#) [Interleukin-18](#) [Interleukin-16](#) [Interleukin-8](#) [Chemotactic factors](#) [eosinophil](#) [Asthma](#) [Mast cells](#)

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