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AusÃancia de associaÃ§Ã£o entre os polimorfismos do gene interleucina-18 e artrite reumatoide Lack of association between interleukin-18 polymorphisms and rheumatoid arthritis

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Resumo

Objetivo

Analisar a associaÃ§Ã£o dos polimorfismos do gene interleucina-18 (IL-18) com artrite reumatoide (AR) e com fatores de risco de doenÃas cardiovasculares (DCV).

MÃetodos

A amostra foi constituÃda por 97 pacientes com AR e 151 controles saudÃveis. Nos primeiros, foram analisados fatores de risco de DCV, tais como nÃveis do colesterol,

hipertensão arterial, tabagismo e fator reumatoide, bem como o nível da proteína C-reativa (CRP). O DNA foi extraído e foram analisados os polimorfismos de nucleotídeo único (SNP) nas posições 607C/A e 137G/C do gene IL-18 em ambos os grupos. O equilíbrio de Hardy-Weinberg (EHW) e o *odds ratio* (OR) foram realizados, considerando IC 95% e $P < 0,05$.

Resultados

As frequências do alelo 607A nos pacientes com AR e nos controles foram de 0,443 e 0,424 e do alelo 137C foram de 0,304 e 0,291, respectivamente. As frequências do genótipo estavam em EHW, exceto em controles no locus 137 ($P = 0,006$). Não foi encontrada associação dos polimorfismos do gene IL-18 com AR, nem com fatores de risco de DCV, incluindo o nível do colesterol e de CRP ($P > 0,05$). Além disso, observaram-se mais indivíduos fumantes entre pacientes com AR em comparação aos controles (OR = 1,691; $P = 0,088$), e os níveis de CRP eram ligeiramente mais elevados em pacientes fumantes quando comparados aos de pacientes não fumantes (OR = 2,673; $P = 0,061$).

Conclusões

Ao analisar uma amostra de pacientes com AR no sul do Brasil, não foi encontrada associação dos polimorfismos do gene IL-18 com AR, nem com os fatores de risco de DCV.

Abstract

Objective

To assess the association of the polymorphisms of the interleukin-18 (IL-18) gene with rheumatoid arthritis (RA) and with risk factors for cardiovascular diseases (CVD).

Methods

This sample comprised 97 patients with RA and 151 healthy controls. In the patients, risk factors for CVD were analyzed, such as cholesterol levels, arterial hypertension, smoking habit, C-reactive protein (CRP) level, and rheumatoid factor. DNA was extracted and the single nucleotide polymorphisms (SNP) at the 607C/A and 137G/C positions of the IL-18 gene were assessed in both groups. The Hardy-Weinberg equilibrium (HWE) was calculated and the odds ratio (OR) test performed, considering a 95% CI and $P < 0.05$.

Results

The frequencies of the allele 607A in patients with RA and controls were 0.443 and 0.424, respectively, and the frequencies of the allele 137C were 0.304 and 0.291, respectively. The genotype frequencies were in HWE, except in controls at the locus 137 ($P = 0.006$). No association was found between IL-18 polymorphisms and RA, nor with risk factors for CVD, including cholesterol levels and CRP ($P > 0.05$). In addition, more smokers were observed among RA patients compared to controls (OR = 1.691; $P = 0.088$), and CRP levels were slightly higher in smokers when compared to non-smokers (OR = 2.673; $P = 0.061$).

The frequencies of the G^*607A allele in patients with RA and in controls were 0,443 and 0.424, respectively, and of the G^*137C allele, 0.304 and 0.291, respectively. The genotype frequencies were in HWE, except for controls in the G^*137 locus ($P = 0.006$). Association of the polymorphisms of the IL-18 gene was found with neither RA nor risk factors for CVD, including cholesterol level and CRP ($P > 0.05$). In addition, more smokers were found among patients with RA as compared with controls ($OR = 1.691$; $P = 0.088$), and the CRP levels were slightly higher in patients who smoked than in patients who did not ($OR = 2.673$; $P = 0.061$).

Conclusions

In this sample of patients with RA in the South of Brazil, association of the polymorphisms of the IL-18 gene was observed with neither RA nor risk factors for CVD.



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Palavras-chave

Interleucina-18; Artrite reumatoide; Doenças cardiovasculares; Polimorfismo gentico; Brasil

Keywords

Interleukin-18; Rheumatoid arthritis; Cardiovascular diseases; Gene polymorphism; Brazil



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