Abstract Preview

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Topic: Immunogenetics and Immunoepigenetics

Title: **Association of CD26/dipeptidyl peptidase IV level with disease activity and bone erosion in rheumatoid arthritis**

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Text: Dipeptidyl peptidase IV (DPP-IV, CD26) plays many roles in the pathogenesis of several autoimmune and inflammatory diseases. The current study evaluated the association of DPP-IV enzymatic activity and its gene expression with disease activity and bone erosion in rheumatoid arthritis. Blood samples were collected from 20 rheumatoid arthritis patients and 40 healthy volunteers. Patients were divided into four subgroups using DAS28 index. CD26 gene expression levels were analyzed in peripheral blood mononuclear cells by quantitative reverse transcription-polymerase chain reaction. Additionally, the enzymatic activity of this molecule in serum was determined using Gly Pro-p-nitroanilide as substrate. Digital radiography was applied to obtain images for bone erosion assessment. No significant difference in serum DPP-IV activity level was seen between patients and controls ($p = 0.140$). However, patients exhibited an increase in CD26 mRNA expression (1.68 times) when compared to controls ($p = 0.001$). Moreover, a strong positive correlation between CD26 gene expression and DAS28 index as well as bone erosion in the hands was observed ($r = 0.71$, $p = 0.002$ and $r = 0.61$, $p = 0.049$, respectively). This study demonstrated that CD26 mRNA expression in rheumatoid arthritis patients is associated with disease activity and bone erosion, suggesting a potential role for this molecule in the immunopathology of rheumatoid arthritis and bone erosion.

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