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EXPRESSION OF ADHESION MOLECULES CD44V3 AND CD44V6 ON T CELLS IN SLE PATIENTS: CORRELATION WITH CLINICAL PHENOTYPE AND DISEASE ACTIVITY

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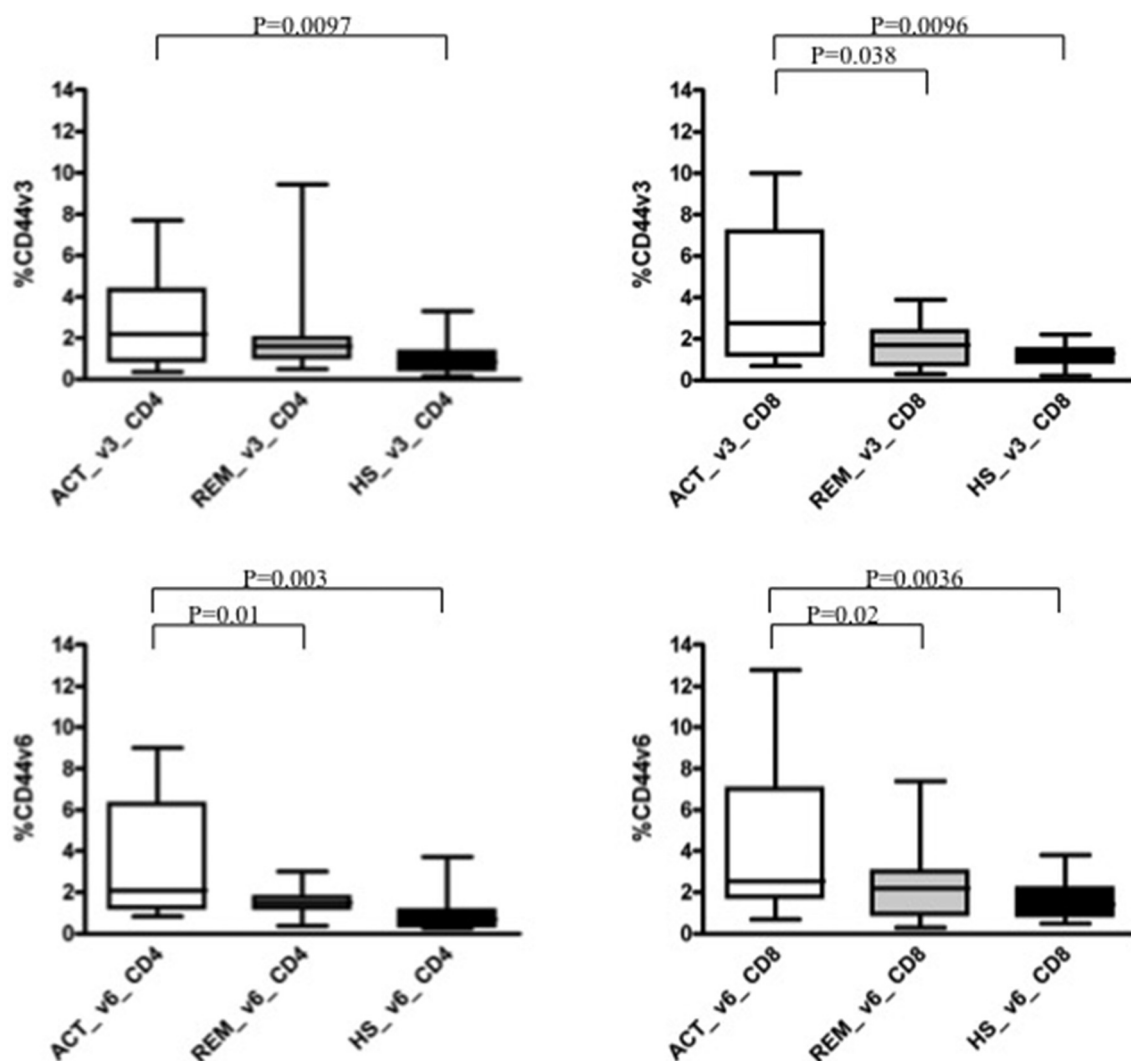
Background Adhesion molecule CD44 enables T lymphocytes' adhesion to endothelium and during inflammation contributes to T cell migration into target organs. CD44 isoforms seem to be involved in the infiltration of peripheral tissues in SLE. A higher expression of CD44v3 and v6 has been observed on T cells from SLE patients compared to healthy subjects (HS) and the expression levels seem to correlate with disease activity. The aim of this study was to investigate the expression of the CD44v3/v6 isoforms on T cells of SLE patients to evaluate their correlation with disease activity and disease phenotypes.

Patients and methods 33 female patients (mean age \pm SD 45.7 \pm 12.3 years, mean disease duration \pm SD 14 \pm 7.8 years) affected by SLE according to the 1997 ACR criteria, were enrolled. Disease activity was evaluated by SLEDAI-2K. 15 patients were in remission (SLEDAI-2k=0), and 18 patients

had an active disease (SLEDAI-2K=4 or higher). 16 HS (mean age \pm SD 33.3 \pm 12.0 years) were also recruited. Expression of CD44v3/v6 was determined by flow cytometry analysis.

Results Expression of CD44v3 on CD4 +T cells and on CD8 +T cells was higher in active patients compared to HS ($p=0.0097$ and $p=0.0096$). CD44v3 on CD8 +T cells was also higher in active patients compared to patients in remission ($p=0.038$). CD44v6 was higher on CD4 +and CD8+T cells from active patients compared to HS ($p=0.003$ and $p=0.0036$) and compared to patients in remission ($p=0.01$ and $p=0.02$) Fig.1. In active patients the ratio CD44v3/v6 was unbalanced towards isoform v6 on both T cell populations. When using a ROC curve analysis, comparing HS and SLE patients, CD44v6 on CD4 +T cells was the most sensible and specific one (specificity of 81.8%, sensitivity of 75%). Expression of CD44v6 on CD4 +and CD8+T cells correlated with the SLEDAI-2k ($p=0.03$, $r=0.38$ and $p=0.02$, $r=0.39$). The expression of CD44v6 and of CD44v3 on CD8 +T cells is associated with renal involvement and arthritis respectively ($p<0.05$, $r=0.47$ and $p=0.023$, $r=0.39$).

Conclusions CD44v3 and v6 expression is significantly associated with different degree of disease activity and with different disease manifestations. Isoform v6 on CD4 +T cells could be useful as a disease biomarker.



Abstract PS1:15 Figure 1