with local disease parameters (lymphocytic focus score (LFS); r=0.744 and % IgA$^+$ cells r=−0.658) as well as with immune cells present in the LSG (CD3 r=0.890; CD20 r=0.717; CD1a r=0.660; CD208 r=0.763).

FACS analysis of isolated cells from patients' LSG confirmed a strongly increased percentage of both CD3 and IL-7R$^+$ CD3 T cells in pSS as compared to nSS (both p<0.01). Furthermore, abundant IL-7R expression was detected on high proportions of CD4 and CD8 (on average 66% ± 5% and 56% ± 4%, respectively). Other CD45$^+$ leucocytes and CD45$^-$ tissue cells did not or hardly express the IL-7R. IL-7R$^+$ CD3, CD4 and CD8 T cells as percentage of the total LSG cells significantly correlated with the LFS (p≤0.05, r=0.533; p≤0.01, r=0.593; p≤0.01, r=0.631, respectively).

The abundant presence of IL-7R$^+$ T cells in the inflamed salivary glands of pSS patients, which correlates to inflammation, suggests that increased IL-7 expression could significantly contribute to glandular inflammation by activation of IL-7R$^+$ effector T cells. Hence, blockade of the IL-7R might be a novel therapeutic strategy for pSS.

A119 IL-7 RECEPTOR EFFECTOR T CELLS ARE INCREASED IN THE INFLAMED SALIVARY GLANDS OF PSS PATIENTS AND CORRELATE WITH INFLAMMATORY MARKERS

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In patients with pSS local T cell-driven inflammation contributes to destruction of exocrine glands associated with clinical symptoms of dryness. Recently the authors documented increased interleukin (IL)-7 in labial salivary glands (LSG) of pSS patients that was capable to induce Th1 and Th17 activity and proinflammatory cytokine secretion. IL-7 mediates its effects by signaling through the high affinity IL-7Rα subunit and γc chain. The authors and others have shown that IL-7R$^+$ CD4 T cells that strongly proliferate upon TCR activation, while IL-7R$^-$ CD4 T cells are anergic and can be regulatory of nature. This suggests that IL-7R$^+$ T cells contribute to the increased inflammatory response in LSG of pSS patients, especially in the presence of increased local IL-7 expression.

To identify IL-7R expression in the labial salivary gland and to examine the phenotypical characteristics of IL-7R$^+$ T cells between pSS and non-Sjögren's syndrome sicca (nSS) patients. The presence of infiltrating immune cells and IL-7R$^+$ cells in inflamed salivary glands of pSS patients (n=14) and non-inflamed LSG of nSS patients (n=7) was studied by immunohistochemistry and FACS analysis upon tissue digestion.

In the LSG of pSS patients significantly increased numbers of IL-7R$^+$ cells were found as compared to nSS (pSS vs nSS; 244.3±40.7 vs 12.3±4.6 cells/mm^2). IL7R$^+$ T cells were found throughout the tissue but mainly in the CD3-rich lymphocytic areas. IL7R$^+$ T cells significantly (all p<0.01) correlated

IL-7 receptor effector T cells are increased in the inflamed salivary glands of pSS patients and correlate with inflammatory markers

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Notes