(17.9% vs 36.7%, $p=0.0094$ and 51.8 vs 69.2%, $p=0.027$, respectively. The corresponding ORs [95%CI] in the dominant model were 0.38 [0.17-0.82] and 0.48 [0.25-0.92], respectively. No statistically significant associations between fatigue status and other SNPs tested were detected.

Conclusion: We report novel associations between genetic makeup and primary SS-associated fatigue with the rs9514828 and rs1224141 *BAFF* T/T genotypes decreasing the likelihood of fatigue development among these patients. These findings need to be validated in multi-center studies.

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AB0182

RECEPTOR ACTIVATOR OF NUCLEAR FACTOR-KAPPA B LIGAND (RANKL)/RANK AND OSTEOPROTEGERIN (OPG) PATHWAY ACTIVATION IN SJOGREN'S SYNDROME

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Background: Primary Sjogren's syndrome (SS) is an autoimmune exocrinopathy characterized by chronic salivary and lacrimal glands dysfunction. Recent studies suggest that activation of the receptor activator of nuclear factor-kappa B ligand (RANKL)/RANK and osteoprotegerin (OPG) pathway is implicated in the development of autoimmunity.

Objectives: The aim of this study is to investigate the contribution of RANK/RANKL/OPG pathway in primary SS pathogenesis.

Methods: Sixty-six primary SS patients fulfilling the American/European criteria and 13 subjects with oral and/or ocular dryness without satisfying the aforementioned criteria (sicca controls, SC) and 11 healthy controls (HC) have been enrolled. RANKL and OPG serum levels were determined by ELISA in 29 SS patients and 11 HC. Total RNA was extracted from minor salivary glands biopsies (MSG) from 43 SS patients and 13 SC and RANKL mRNA expression was assessed by qRT-PCR. Protein expression of RANKL was determined by Western Blot and immunohistochemistry (IHC) in total protein extract and paraffin embedded tissue respectively, derived from MSG biopsies of 6 primary SS patients and 5 SC. Statistical analysis was performed with SPSS 24.0 package.

Results: Increased serum levels (pg/ml) of RANKL (mean±SD=4.197±897.6vs mean±SD=144.8±290.2, $p=0.013$) and OPG (mean±SD=173.4±57.52, mean±SD=48.42±21.89, $p=0.015$) were detected in SS patients compared to HC. Higher RANKL at both mRNA and protein level by IHC were detected, in MSG derived from primary SS patients compared to SC. RANKL protein expression was significantly increased in MSG biopsies from primary SS patients compared to SC by Western Blot (mean±SD=2.468±1.896 vs mean±SD=0.5138±0.823, $p=0.0335$).

Conclusion: Increased serum levels, mRNA and protein expression of RANKL in association with increased OPG titers in SS patients compared to controls, suggests that the activation of RANK/RANKL/OPG pathway contributes to SS pathogenesis.

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AB0183

THE ROLE OF THE PHOSPHOLIPASE LP-PLA2 ACTIVITY IN SJOGREN'S SYNDROME RELATED LYMPHOMAGENESIS: A NEW SERUM BIOMARKER?

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Background: One of the major complications of primary Sjogren's syndrome (SS) is the development of B-cell non-Hodgkin's lymphoma (B-NHL). The contribution of tissue macrophages in the pathogenesis of B-NHL, based on previous histopathological studies, appears to be significant. Extracellular lipoprotein-associated phospholipase A2 (Lp-PLA2) is a product of tissue macrophages which is found in the circulation associated with lipoproteins and has been involved in both cardiovascular and malignant diseases, including B-NHL lymphoma.

Objectives: The purpose of the current study was to investigate the role of serum Lp-PLA2 activity as a potential biomarker for the development of B-NHL in the setting of primary SS.

Methods: Extracellular Lp-PLA2 activity was determined by measuring [³H]PAF degradation products in liquid scintillation counter in serum samples obtained from 48 primary SS patients, 9 primary SS patients complicated by lymphoma (SS-lymphoma) and 40 healthy controls. Similar results were obtained in an independent cohort of 25 primary SS patients, 17 primary SS-lymphoma and 10 healthy controls, when a commercially available ELISA kit was implemented. Statistical analysis was performed with the Graph Pad software.

Results: The activity of Lp-PLA2 was statistically significant increased in patients with primary SS-lymphoma compared to primary SS patients without lymphoma [mean±SD (nmol/min/ml): 62.0±13.4 vs 47.7±14.7, $p=0.003$ and 19.7±4.7 vs 15.2±3.2, $p=0.005$, respectively], as well as healthy controls [mean±SD (nmol/min/ml): 62.0±13.4 vs 52.0±16.3, $p=0.03$ and 19.7±4.7 vs 15.7±3.1, $p=0.06$, respectively]. No statistical significant differences in Lp-PLA2 activity were detected between primary SS patients without lymphoma development and healthy controls.

Conclusion: Evaluation of extracellular Lp-PLA2 activity in primary SS patients could be a useful serological biomarker for B-NHL development in the context of primary SS.

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