RESULTS: Naïve SKG ileum displayed dysbiosis with increased expression of ER stress markers Grp78, xBP1, CHOP and reduced mucin staining. After curdian treatment, goblet cell numbers were decreased and IL-24 mRNA was increased compared to BALB/c controls. By IF, IL-24 localized to the goblet cells of the ileum in SKG and BALB/c mice and 2 weeks post curdian, ileal goblet cell number was correlated with IL-24 staining intensity. In MUC2⁺ LS-174T but not MUC2⁺ HT-29 cells, thapsgargin induced a rapid and transient increase in IL-24 transcription and subsequent ER stress with CHOP induction, suggesting an acute goblet cell-specific response associated with high mucous production. IL-24 knockdown in LS-174T increased ER stress and apoptosis including increased CHOP, BAX and active caspase 3 expression.

CONCLUSION: Despite goblet cell IL-24 over-expression in dysbiotic naïve SKG ileum, goblet cell loss due to stress associated with increased mucous production also depletes IL-24. In an in vitro model of goblet cell stress, IL-24 mitigates ER stress-induced apoptosis, suggesting that IL-24 production in SKG ileum is insufficient to prevent the disease cascade that commences with goblet cell apoptosis and epithelial barrier breakdown.

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POSO432

CHARACTERIZATION OF THE CARDIOVASCULAR DISEASE PROTEOMIC PROFILE IN SPONDYLOARTHRITIS PATIENTS: POTENTIAL BIOMARKERS FOR PERSISTENT INFLAMMATION

Keywords: Biomarkers, Cardiovascular disease, Spondyloarthritids

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Background: patients with Spondyloarthritis (SpA) have an increased risk of cardiovascular disease. Taking into account the strong relationship between inflammation and CVD, there is an urgent need to identify different molecular drivers of CVD signs and their association with inflammation.

Objectives: to investigate the alteration of CVD-related proteins in the plasma of SpA patients, their association with clinical features, and to evaluate their potential role as biomarkers for the identification of persistent inflammation.

Methods: a cross-sectional study including 120 patients with SpA and 30 age-sex-matched healthy donors (HDs) was carried out. Clinical and laboratory parameters and CVD risk factors were recorded. To measure the presence of persistent inflammation, levels of CVD drivers of SpA were assessed by two independent blinded readers using modified Stoke Ankylosing Spondylitis Disease Activity Score (ASDAS) and clinical and laboratory parameters adjusted for CVD attributes. Associations were analyzed using Spearman’s Correlation Coefficient (r). Linear modelling was used to determine the association between miRNAs and laboratory/clinical parameters adjusted for CRP, age and sex.

Results: MPS detected 432 miRNAs; however, only 90 miRNAs passed through the selection criteria (p<0.05, BaseMean=10, the difference in log2FC<0.5). We selected 45 miRNAs for validation based on the selection criteria and the literature. We validated miR-1-3p (p=0.006, FC=-1.757) to be upregulated and miR-1248 (p=0.002, FC=-1.125) and miR-124-6 (p=0.002, FC=-1.125) to be downregulated in patients with axSpA compared to HD. In addition, the expression of miR-1-3p correlated with the plasma levels of IL-17 (p=0.016, r=0.22), but not with the gene expression of IL-17 or TNF in PBMCs. MPS detected 432 miRNAs; however, only 90 miRNAs passed through the selection criteria (p<0.05, BaseMean=10, the difference in log2FC<0.5). We selected 45 miRNAs for validation based on the selection criteria and the literature. We validated miR-1-3p (p=0.006, FC=-1.757) to be upregulated and miR-1248 (p=0.002, FC=-1.125) and miR-124-6 (p=0.002, FC=-1.125) to be downregulated in patients with axSpA compared to HD. In addition, the expression of miR-1-3p correlated with the plasma levels of IL-17 (p=0.016, r=0.22), but not with the gene expression of IL-17 or TNF in PBMCs. miR-1-3p (p=0.039, p=0.685) as well as miR-1248 (p<0.001, p=0.207) correlated with the IL-8 gene expression in PBMCs. None of the miRNAs distinguished between radiographic and non-radiographic disease or correlated with disease activity or radiographic spinal impairment.

Conclusion: This cross-sectional study failed to demonstrate association between cellular miRNAs, disease activity or spinal impairment, but the association between miR-1-3p, IL-17 and TNF may suggest its role in the pathogenesis of axSpA.

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POSO434

CCL20 INHIBITION AMELIORATES PERIPHERAL ARTHRITIS IN ANKYLOSING Spondylitis

Keywords: Animal models, Adaptive immunity, Spondyloarthritidis

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