Two hundred and three SSc patients were included, 163 (80%) were female, with a mean ± standard deviation (SD) age of 59±13 years and a mean ±SD disease duration of 12±9 years. Eighty-one (41%) patients had diffuse cutaneous SSc and mean ±SD mRSS was 6.6±7.7. Lung fibrosis on imaging was observed in 33% of the patients, 7% had pulmonary arterial hypertension, 44% had history of digital ulcers and 41% were taking immunosuppressive therapy. Furthermore, we showed GM-CSF induced Dectin-2 expression on BMDM, and IL-6 in the heart of the mice treated with CAWS for 24 hours (at the early phase), but not GM-CSF and Dectin-2. These results suggest that GM-CSF mediates CAWS-induced vasculitis via Dectin-2 upregulation and IL-10 inhibits the downstream of GM-CSF and Dectin-2 signalling.

Acknowledgments: The aim of the study is to investigate the therapeutic effect of IL-10 in CAWS-induced vasculitis and elucidate the underlying pathogenesis of KD.

Methods: To induce the expression of IL-10 in vivo, Adeno-associated virus (AAV) vectors encoding IL-10 were injected into DBA/2 mice. After the induction of IL-10, the mice were treated intraperitoneally with CAWS to induce vasculitis. Cardiac functions by echocardiography, inflammation and fibrosis by histological analyses, gene expression of inflammatory cytokines and fibrosis-related factors in the heart, and infiltrating cells by flow cytometry were assessed to evaluate the effects of IL-10.

Results: For in vitro study, bone marrow-derived macrophages (BMDM) were stimulated with CAWS in presence or absence of IL-10. TNF-α and IL-6 produced by the BMDM and Dectin-2 expressions on the BMDM were assessed.

Conclusions: We have shown that IL-10 may have therapeutic application in the prevention of coronary vasculitis and aneurysm formation, and provided new insights into the mechanism underlying the pathogenesis of KD.

Disclosure of Interest: None declared


SOLUBLE CD163 AS A POTENTIAL BIOMARKER IN SYSTEMIC SCLEROSIS

C. Frantz, S. Pezet, J. Avouac, Y. Allarone. INSERM U1016, UMRS104, Paris Descartes University, Rheumatology A department, Cochin Hospital, Paris, France

Background: Recent accumulating evidences indicate a crucial role of macrophage lineage in the pathogenesis of fibrotic diseases including systemic sclerosis (SSc). CD163 is a surface marker expressed by M2 macrophages that accumulate during the healing phase of acute inflammation. It is actively released from the plasma membrane in response to certain inflammatory stimuli and enters the circulation in its soluble form (sCD163).

Objectives: In this study, we aimed to evaluate the performance of serum and urinary sCD163 concentrations as potential biomarker in SSc.

Methods: Urine and serum samples were obtained from SSc patients, fulfilling the 2013 ACR/EULAR classification criteria for SSc, and age- and sex-matched controls. Serum and urinary sCD163 concentrations were measured by commercially available ELISA kit (R and D systems) and evaluated for their significance as potential biomarkers. Statistical analysis was carried out using Mann-Whitney U test and the relationship between parameters was statistically examined by Spearman’s rank test.

Results: Two hundred and three SSc patients were included, 163 (80%) were female, with a mean ± standard deviation (SD) age of 59±13 years and a mean ±SD disease duration of 12±9 years. Eighty-one (41%) patients had diffuse cutaneous SSc and mean ±SD mRSS was 6.6±7.7. Lung fibrosis on imaging was observed in 33% of the patients, 7% had pulmonary arterial hypertension, 44% had history of digital ulcers and 41% were taking immunosuppressive therapy. Furthermore, we showed GM-CSF induced Dectin-2 expression on BMDM, and IL-6 in the heart of the mice treated with CAWS for 24 hours (at the early phase), but not GM-CSF and Dectin-2. These results suggest that GM-CSF mediates CAWS-induced vasculitis via Dectin-2 upregulation and IL-10 inhibits the downstream of GM-CSF and Dectin-2 signalling.

Conclusions: We have shown that IL-10 may have therapeutic application in the prevention of coronary vasculitis and aneurysm formation, and provided new insights into the mechanism underlying the pathogenesis of KD.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.4610

ADENO-ASSOCIATED VIRUS VECTOR-MEDIATED INTERLEUKIN-10 INDUCTION PREVENTS VASCULAR INFLAMMATION IN A MURINE MODEL OF KAWASAKI DISEASE

J Nakamura1,2, S. Watanebe1, H. Kimura1, H. Mizukami1, N. Nagi-Miura1, N. Ohno1, M. Takahashi1, S. Minota2. 1Division of Inflammation Research, 2Rheumatology and Clinical Immunology, 3Division of Genetic Therapeutics, Jichi Medical University, Shimotsuke, Tochigi; 4Laboratory for Immunopharmacology of Microbial Products, School of Pharmacy, Tokyo University of Pharmacy and Life Sciences, Hachioji, Tokyo, Japan

Background: Kawasaki disease (KD), which is a common paediatric heart disease, is characterised by coronary vasculitis and subsequently aneurysm formation. Although the administration of intravenous immunoglobulin (IVIG) is effective for reducing aneurysm formation, approximately 10–20% of patients are resistant to this therapy. Therefore, additional therapeutic approaches for treating the IVIG-resistant patients need to be developed.

Candida albicans water-soluble fraction (CAWS)-induced vasculitis on coronary arteries and root of aorta is a frequently used murine model of KD. It has been considered that C-type lectin receptor Dectin-2 recognises CAWS. Recent studies showed CAWS-resistant strains of mice have higher serum IL-10 levels, which suggested that IL-10 might negatively regulate the development of CAWS-induced vasculitis.

Objectives: The aim of the study is to investigate the therapeutic effect of IL-10 in CAWS-induced vasculitis and elucidate the underlying pathogenesis of KD.

Methods: To induce the expression of IL-10 in vivo, Adeno-associated virus (AAV) vectors encoding IL-10 were injected into DBA/2 mice. After the induction of IL-10, the mice were treated intraperitoneally with CAWS to induce vasculitis. Cardiac functions by echocardiography, inflammation and fibrosis by histological analyses, gene expression of inflammatory cytokines and fibrosis-related factors in the heart, and infiltrating cells by flow cytometry were assessed to evaluate the effects of IL-10.

Results: For in vitro study, bone marrow-derived macrophages (BMDM) were stimulated with CAWS in presence or absence of IL-10. TNF-α and IL-6 produced by the BMDM and Dectin-2 expressions on the BMDM were assessed.

Conclusions: We have shown that IL-10 may have therapeutic application in the prevention of coronary vasculitis and aneurysm formation, and provided new insights into the mechanism underlying the pathogenesis of KD.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.4610

STIMULATED MONOCYTE-DERIVED MACROPHAGES FROM PATIENTS WITH ENTHESITIS RELATED ARTHRITIS SECURE HIGHER LEVELS OF IL23 AND LOWER LEVELS OF INTERFERON GAMMA COMPARED TO HEALTHY CONTROLS

C Fisher1,2, D. Eleftheriou1, D. Sen1,2, Y. Ioannou1. 1Arthritis Research UK Centre for Adolescent Rheumatology, University College London; 2National Institute for Health Research University College London Hospitals Biomedical Research Centre, University College London and University College London Hospital, London, UK

Background: Enthesitis related arthritis (ERA) is the subtype of juvenile idiopathic arthritis most closely related to adult spondyloarthropathy (SpA).

Disclosure of Interest: None declared