involvement we observed that gp130/sIL-6Rb, sIL-6Ra, IL-35, and TSLP serum levels were significant enhanced in MO-BD compared to M-BD subgroup.

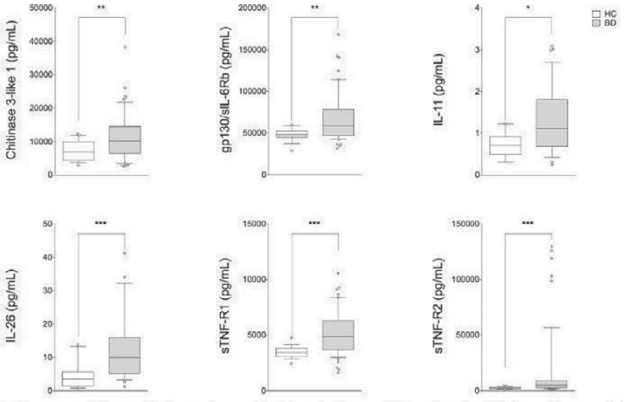

Fig.1. Serum cytokine profile in patients with Behçet's disease. BD patients (n=54) showed up-regulation of serum levels of Chitinase3-like1, gp130/sIL-6Rb, IL-11, IL-26, sTNF-R1 and sTNF-R2 compared with HC (n=19). Mann-Whitney U-test as well as Student's t-test were carried out to check for statistical significance between groups when required (***p<0.001, **p<0.01, *p<0.05). The central line represents the distribution median, boxes span 25th to 75th percentiles, and error bars extend from 10th to 90th percentiles. Dots (°) are outlier values, higher than the 90th percentile. Abbreviations: HC, healthy controls; BD, Behçet's disease.

Conclusions: Our findings showed a signature of IL-6, TNF-α as well as of Th17 response in BD patients due to increased levels of gp130/sIL-6Rb, sTNF-R1, sTNF-R2, IL-26 respectively. This evidence could contribute to improve the knowledge regarding the role of these citokines in the induction of specific BD clinical features

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Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.1935

AB0038 INCREASED INTERFERON-ALPHA PRODUCTION BY PLASMACYTOID DENDRITIC CELLS STIMULATED WITH A TLR-7 AGONIST IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Type I interferon (IFN) appears to contribute to the development of systemic lupus erythematosus (SLE). IFN-α production is known to be increased in peripheral blood mononuclear cells (PBMCs) from SLE patients. Although plasmacytoid dendritic cells (pDCs) is a major source of IFN-α, previous reports showed that IFN-α production by pDCs stimulated with a TLR-9 agonist was decreased in SLE compared to healthy controls (HC).
Objectives: We set out to investigate an other endosomal TLR-signaling pathway in SLE by using TLR-7 agonist stimulation.
Methods: Blood samples were obtained from 55 HC and 73 SLE patients, diagnosed according to the systemic lupus international collaborating clinics classification criteria for systemic lupus erythematosus (2012). PBMC from SLE patients and HC were stimulated with a TLR-9 agonist, CpG-A oligodeoxynucleotides (CpG-A ODN)-2216, and a TLR-7 agonist, imiquimod. The proportion of pDCs producing IFN-α was investigated by intracellular cytokine staining and flowcytometory. PBMC were pretreated with IFN-α for 24 hours, and then IFN-α production by pDCs was assessed after imiquimod stimulation.
Results: As previously reported, the level of IFN-α production by pDCs stimulated with CpG-A ODN was reduced in SLE compared with HC. However, the proportion of IFN-α producing pDCs stimulated with imiquimod was significantly increased in SLE patients. The percentage of IFN-α producing pDCs stimulated with imiquimod was positively correlated with SLE disease activity index (SLEDAI) score, and that of pDCs stimulated with CpG-A ODN was negatively correlated with SLEDAI. The expression of TLR-7 on pDCs, but not TLR-9, was upregulated in SLE patients compared with HC. Furthermore, pretreatment with IFN-α increased IFN-α production by pDCs upon imiquimod stimulation.
Conclusions: IFN-α production by pDCs form SLE patients was increased when stimulated with a TLR-7 agonist, and this was accompanied with upregulated TLR-7 expression in these cells. In murine lupus-models, TLR7-deletion has been shown to reduce autoimmune disease. The enhanced TLR-7 signaling pathway in pDC may play an important role in lupus pathology.

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Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.3074

AB0039 REDUCTION OF TH17+ LYMPHOCYTES IN PART OF SAPHO PATIENTS ON TREATMENT WITH SECUKINUMAB

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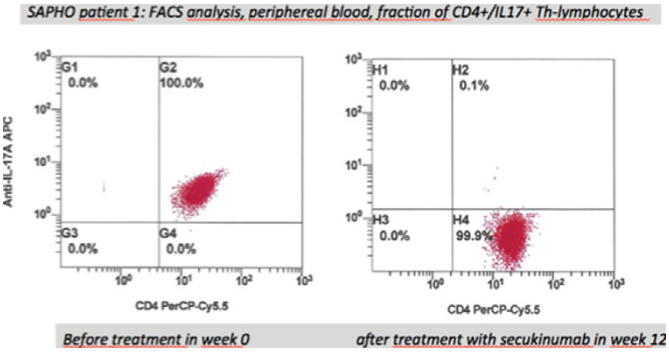
Background: The SAPHO syndrome has to be considered as a rare subtype of the disease entity of the seronegative spondylarthritis. The characteristic defining symptoms are synovitis, acne, palmoplantar pustulosis (PPP), and hyperostosis with osteitis. In general, most of SAPHO patients complete the diagnostic criteria for spondylarthritis and/or psoriatic arthritis. The etiology of SAPHO syndrome remains unclear so far, autoimmune dysregulations potentially triggered by bacterial infection with propionibacterium acnes has been discussed. Firinu D et. al (Ref.) has previously published data of higher Th17+ lymphocytes in the peripheral blood in SAPHO patients compared with psoriatic arthritis patients or healthy controls. Activation of the TH17 pathway leads to pro-inflammatory effects mediated by interleukin 17 with stimulation of osteoblast, macrophages, and fibroblasts with the consequences of secretion f pro-inflammatory cytokines such as interleukin 6 and 1, TNF alpha, and MMPs. The interleukin 17 blocking agent secukinumab has been introduced in the armentarium of antirheumatic drugs against seronegative spondylarthritis including psoriatic arthritis.
Objectives: To evaluate the count of Th17+ lymphocytes in patients with SAPHO syndrome and psoriatic arthritis before and under treatment with secukinumab.
Methods: Peripheral blood was derived from 4 patients with SAPHO syndrome and 4 patients with psoriatic arthritis, respectively before and under 12 week treatment with secukinumab 300mg (dosage: 4 times weekly, then monthly). All patients had received at least one conventional DMARDs and one TNF blocking agent in their medical history. All patients showed active disease with elevated scores of DAS28 and/or HAQ, for SAPHO patients the activity scores of osteitis (from 0 to 6) and PPP (0–6) were estimated by physician. The blood specimen were separated in EDTA containing tubes to separate lymphocytes, which were measured using FACS analysis to evaluate the fraction of Th 17+/CD4+ lymphocytes. The Ethics Committee of Saarland has proven the study, all patients gave their consent to take part in the study.
Results: The Th17+lymphocytes were not detectable in 4 patients with psoriatic arthritis and 2 of 4 SAPHO patients before and under 12 week treatment with secukinumab. In 2 of 4 SAPHO patients the fractions of Th17+ lymphocytes were prominent prior to secukinumab application; after treatment duration of 12 weeks one of both developed a depletion of Th17+ cells (figure), the other SAPHO patient a Th17+ cell reduction. Only the two SAPHO patients with diminishing Th17+ lymphocytes have developed treatment response evaluated by reduction of HAQ score (from 1.75 to 1.25), osteitis score (4.5 to 3.0), and PPP score (5.0 to 4.0). Three of 4 psoriatic arthritis patients showed reduced diseases activity under treatment with secukinumab (DAS28 score from 4.22 to 3.45, HAQ 2.25 to 1.5).



Conclusions: The measurement of Th17+lymphocytes in the peripheral blood of SAPHO patients could be suggested for further evaluation as possible predictor of treatment response by secukinumab.

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