Conclusions: The alteration of B cells subsets is an early event in LN without differences regardless the period of renal involvement (nephritic onset or later LN development). The association between persistent proteinuria and a lower percentage of plasmablasts at the baseline could be a negative prognostic factor considering the correlation between persistent proteinuria and worse renal outcome.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5436

AB0172 THE RELATIONSHIP BETWEEN THE DIFFERENT TYPES OF CELL DEATH IN SYSTEMIC CONNECTIVE TISSUE DISEASES

V. Shishkin, G.V. Kudriavtseva, Y.A. Malenkov, V.V. Shishkin. Saint Petersburg State University, Saint Petersburg, Russian Federation

Objectives: To study the basic mechanism of cell death (autophagy, apoptosis and necrosis) typical of patients with rheumatoid arthritis (RA), systemic lupus erythematosus (SLE) and systemic sclerosis (SSD). During systemic connective tissue diseases and especially in SLE, a close relationship between various types of cellular death is observed.

Methods: 7 SLE-, 10 RA-, 10 SSD patients' and 5 donors' sera were studied. The level of Ca ions was registered by the method of **atomic absorption spectrometry**. Adenosine monophosphate-activated protein kinase (AMPK) was estimated by the Western blotting method. The activity of ATP-ase was measured spectrophotometrically. In order to find out the level of p53 protein, the immune-enzyme "Human p53 Platinum ELISA" method was employed. The quantity of hemoprotein (Cyt c) and the level of 8-hydroxy-2'-deoxyguanosine (8-OH-dG) was measured by employing the immune-enzyme method.

Results: Assessing the functional activity of AMPK is an specific marker and a strategic biopower regulator of autophagy, as well as a specific indicator of red-ox cellular potential. In systemic connective tissue diseases, the oxidative stress is matched by urinary calcium and a decrease in the level of calcium in the blood. It reflects the level of seriousness of osteoporosis especially in case of RA. Molecular chaperones (HSP) play a key role in the changing of the way of cellular death. The family of chaperones HSP60 – HSP 100 shows ATPase activity which is most distinct during SLE and RA. The de-energisation of cells during systemic connective tissue diseases and the disappearing of the link between respiration and oxidative phosphorylation lead to proapoptotic protein – Cyt c is being released from mitochondria. High levels of Cyt c reflect cellular mitochondrial apoptosis and show the growing of hypoxia in SLE and RA. The level of protein p53 – a biological marker of apoptosis – is expressed when the DNA is destroyed. It reflects a higher level of the oxidative damage done to the DNA and the extent of the oxidative stress in SLE. This is also evidenced by the data collected by finding out the level of 8-OH-dG which is a biological marker of the free-radical damage of the DNA.

Comparison of markers of autophagy, apoptosis and necrosis in sera in SLE, RA and SSD: AMPK activity (units-mg of protein), the total level of ATP-ase active of HSP-60 – HSP-100 (nmol Pi/min-mg protein), (mM/l), quantity of (ng/ml): Cyt c, p53-protein, 8-OH-dG

Abstract AB0172 – Table 1

Groups	AMPK	ATP-ase	Cyt c	p53 protein	8-OH-dG
SLE	8,7 ±0,3	8,4±0,3 ±0,12	39,7 ±1,4	1,45±0,03	27,9±3,2
RA	5,7 ±0,2	7,9±0,2 ±0,24	26,8 ±2,3	1,27±0,04	24,2±2,3
SSD	2,8 ±0,4	5,1±0,2 ±0,09	14,9 ±2,6	0,98±0,03	18,6±3,4
Donor	1,4 ±0,3	4,0±0,7 ±0,32	11,7 ±0,3	0,73±0,07	12,56 ±2,4

Conclusions: Chaperone-mediated induction of the immune response by autophagy, an evolutionary enshrined only in mammals, perhaps, is the central link in the pathogenesis of systemic connective tissue diseases.

REFERENCE:

[1] Shishkin VI, et al. Ann Rheum Dis 2017;76:6–507.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.4210

AB0173 OVERWHELMING INFLAMMATION INCREASED SUSCEPTIBILITY OF SLE-PRONE MICE TO PULMONARY BACTERIAL INFECTION

W. Li¹, X. Tang², S. Huang², L. Sun². ¹The Affiliated Drum Tower Hospital of Nanjing University Medical School, nanjing, China; ²Department of Rheumatology and Immunology, The Affiliated Drum Tower Hospital of Nanjing University Medical School, nanjing, China

Background: Aside from the disease itself, infections represent the major cause of morbidity and mortality in systemic lupus erythematosus (SLE) patients. Inherent defects in immune system play an important role in increasing rates of infection. However, the underlying mechanism of this deficiency remains largely unknown.

Methods: Lupus-prone mice B6/lpr were anaesthetized and infected with 1×10⁸ CFU of *Haemophilus influenzae* (Hi) intranasally. Then bacterial clearance, body weight change and lung pathology were monitored. Apoptosis of lung cells was analysed by TUNEL assay. Both innate and adaptive immune response in the lung cells determined by flow cytometry. Cytokines in the bronchoalveolar lavage fluid (BALF) were measured by ELISA.

Results: Although both wild-type (WT) and B6/lpr mice survived after pulmonary Hi infection, a delay of bacterial clearance and inflammatory resolution was observed in B6/lpr mice. Tissue damage was more severe in the lungs of B6/lpr mice, as more apoptotic cells were detected on Day2 after infection. Cells from lupus-prone lungs produced more pro-inflammatory cytokines IL-6, MCP-1 and KC. TNF-α is comparable between the two groups. NK, γδ T and CD4 T cells are required for control bacterial infection. We that compared with WT controls, in response to infection fewer NK cells were detected in B6/lpr lungs. The numbers of γδ and CD4 T cells were not different, but their ability to secrete IFN-γ was significant lower in B6/lpr mice.

Abstract AB0173 – Figure 1

Conclusions: The increased susceptibility of SLE-prone mice to pulmonary *Haemophilus influenzae* infection may due to the elevated inflammatory responses and the deficient production of IFN-γ by immune cells.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.3393

AB0174 TNF-A MODULATES MICROGLIA ACTIVATION VIA NF-KB ACTIVITY IN SYSTEMIC LUPUS ERYTHEMATOSUS WITH DEPRESSION

X. Kong¹, K. Shen², J. Ji¹, T. Fu³, J. Yang³, Z. Gu¹. ¹Department of Rheumatology, Affiliated Hospital of Nantong University; ²Department of Pharmacy, Affiliated Hospital of Nantong University; ³Research Center of Clinical Medicine, Affiliated Hospital of Nantong University, Nantong, China

Background: Systemic lupus erythematosus (SLE) is a complex autoimmune disease accompanied by damage to a variety of tissue injuries, such as joints, kidney, and the peripheral and central nervous systems (CNS).¹ The diffuse CNS lupus manifests with a diverse array of neuropsychiatric symptoms that range from headaches, anxiety, depression, to cognitive impairment and, in rare cases, psychosis.² Additionally, up to 24% of SLE patients will display