End-stage renal disease	3 (12)
SLEDAI before admission (median, IQR)	7 (4 to 11)
SLEDAI on admission (median, IQR)	6 (2 to 11)
Medications	
Prednisone	25 (96)
Hydroxychloroquine	19 (73)
Mycophenolate	9 (35)
Cyclophosphamide	7 (27)
Belimumab	1 (4)
Cause of death	
Infection	15 (58)
Lupus activity	4 (15)
Cardiogenic shock	2 (8)
Cancer	2 (8)
Other	3 (12)

IQR = Interquartile range

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Disclosure of Interests: None declared
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AB0517 IMPAIRED INTESTINAL BARRIER FUNCTION IN SLE MEASURED BY SERUM ZONULIN

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Background: Systemic lupus erythematosus (SLE) is a multi-system autoimmune disease characterized with the secretion of normal autoantibodies, which leads to the involvement of multiple organs. Several observations have showed that the breakdown of immune tolerance was involved in the pathogenesis of SLE, especially the imbalance of Th17/Treg [1], but the mechanism of the impaired immune tolerance is unknown yet. Numerous researches support that intestinal mucosal barrier is an upstream mechanism leading to impaired immune balance [2]. However, the relationship between intestinal mucosal barrier and SLE is little known.
Objectives: To measure the expression of serum zonulin to assess and compare the function of intestinal mucosal barrier in patients with SLE and healthy adults, and to explore the role of intestinal mucosal barrier in the pathogenesis and development of SLE.
Methods: 20 patients with SLE who hospitalized at the Second Hospital of Shanxi Medical University and 10 age and gender-matched healthy adults were enrolled in this study. We collected the blood sample of the patients and healthy controls to examine the function of intestinal mucosal barrier and the absolute number of Th17 and Treg cells. The level of serum zonulin was measured by ELISA to assess the function of intestinal mucosal barrier. The absolute number of Th17 cells and Treg cells was detected by flow cytometry. Disease activity indicators of patients with SLE were collected from laboratory including erythrocyte sedimentation rate (ESR, mm/h), complement 3(C3, g/l) and anti-dsDNA (IU/ml). Then we compared the expression of serum zonulin between the patients and healthy controls and analyzed the correlation of serum zonulin with Th17 cells, Treg cells and disease activity.
Results: The level of serum zonulin of SLE group were significantly higher than that of healthy control group (p<0.05). And the expression of serum zonulin was positively correlated with the level of ESR (r=0.491, p=0.033) and anti-dsDNA, but was negatively correlated with C3 (r=-0.519, p=0.018). And the expression of serum zonulin was not correlated with the absolute number of Th17 cells and Treg cells (P>0.05), but Th17 cells showed a trend of increasing with the increase of zonulin, while Treg cells showed a trend of decreasing with the increase of zonulin.
Conclusion: The results here showed that the level of serum zonulin,a marker of the intestinal mucosal barrier function,was up-regulated in patients with SLE, and the higher level of serum zonulin was positively correlated with the disease activity of SLE, which indicated that impaired intestinal mucosal barrier function in SLE played an important role in the development of the disease.

Table 1. A summary of baseline demographics of all enrolled patients and healthy controls

	HC(n=10)	SLE(n=20)	P value
Age(years)	44.1±18.8	42±12.384	P=0.76
Sex(male/female)	2/8	2/18	P=0.47

Results are expressed as the mean ± standard error. Normally distributed continuous variables were analyzed by the independent-samples Student's t-test.

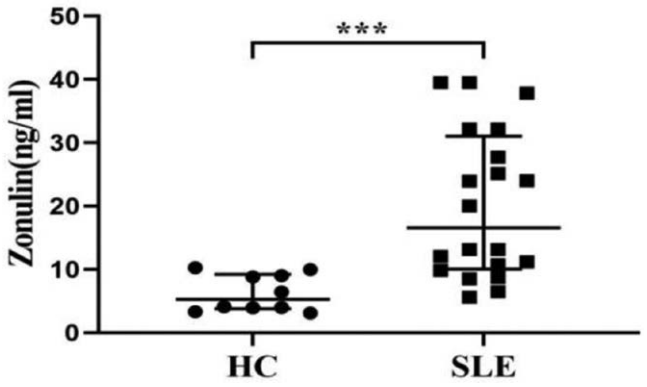

Figure 1. The difference of the expression of serum Zonulin in patients with SLE and healthy controls. Statistical analyses were performed by the Mann-Whitney U test.(***P<0.001)

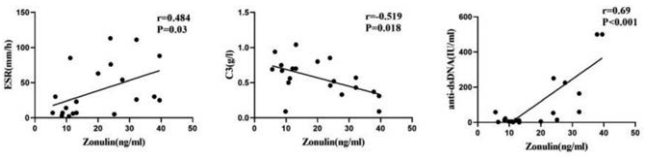

Figure 2. The correlation of disease activity with the level of serum Zonulin.Statistical analyses were performed by the Spearman correlation analysis.

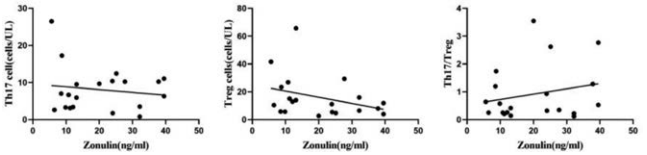

Figure 3. The correlation of disease activity with the level of serum Zonulin. Statistical analyses were performed by the Spearman correlation analysis.

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AB0518 OBESITY PARADOX IN SLE PATIENTS LOWER BMI TRADUCES TO HIGHER DISEASE ACTIVITY.

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Background: Cachexia plays an important role in rheumatoid arthritis (RA), due to its chronic inflammatory process characterized by decreased muscular mass with preservation or increase of fat that occurs in 1-13% of the RA population. A decreased BMI has a paradoxical relationship with disease activity, with an increase in disease activity and mortality (1). Systemic lupus erythematosus (SLE) is an autoimmune disease characterized by the production of nuclear autoantibodies that can form immune complexes and cause inflammation of multiple organs. Cardiovascular events and mortality are nearly twice as high in patients with SLE as in the general population. (2)
Objectives: To determine the relationship between BMI and disease activity in patients with SLE.
Methods: A cross-sectional, observational study was conducted in which a group of 58 patients with SLE were included and their level of disease activity was determined using the Systemic Lupus Erythematosus Disease Activity Index (SLEDAI) and BMI. Distribution was assessed with the Kolmogorov-Smirnov test. Descriptive analysis using measures of central tendency. Correlation between BMI and SLEDAI with Pearson's test. A p value <0.05 was considered statistically significant.

Results: The mean age of SLE patients was 35.4 ± 12.11 years, rest of demographic characteristics in Table 1. Pearson's test showed a correlation between BMI and disease activity (r= -0.304, p= 0.020) Image 1. Multivariate analysis found that a decrease in BMI is independently associated with an increase in disease activity assessed by SLEDAI (B= -0.411, 95% CI= -0.819- -0.003, p=0.049).

Table 1. Demographic characteristics

	SLE n=58
Female n (%)	54 (93.0)
Age, years, mean ± SD	35.4 ± 12.1
DM n (%)	2 (3.4)
AH n (%)	12 (20.6)
DLP n (%)	4 (6.8)
Obesity n (%)	4 (6.8)
SLEDAI mean ± SD	8.06 ± 6.4
ANA positivity n (%)	47 (81.0)
BMI mean ± SD	25.0 ± 4.9

DM; Diabetes Mellitus, AH; Arterial Hypertension, DLP; Dyslipidemia, SLEDAI; Systemic Lupus Erythematosus Disease Activity Index, ANA; Anti-Nuclear Antibodies, BMI; Body Mass Index.

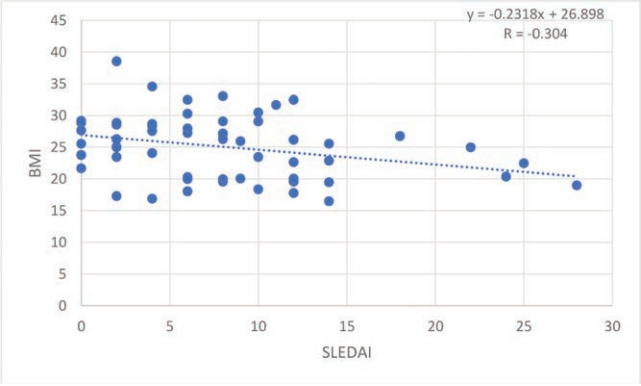

Figure 1. Correlation between BMI and SLEDAI.

Conclusion: The results show an inverse relationship between BMI and disease activity in patients with SLE. Further studies with a larger number of patients should be performed.

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AB0519 ELECTROCARDIOGRAPHIC ALTERATIONS IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS AND CONTROLS.

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Background: Systemic lupus erythematosus (SLE) is an autoimmune disease with a high prevalence worldwide. Patients with SLE have a higher frequency of developing cardiovascular disease than the general population. There is little evidence on conduction abnormalities and arrhythmias in patients with SLE(1).
Objectives: The aim of this study is to compare electrocardiogram alterations in patients with SLE and a control group.
Methods: A cross-sectional, observational, comparative study was performed. A total of 70 patients with SLE, and 70 controls matched for age (± 5 years) and gender were recruited. An electrocardiogram was performed in all study subjects. Kolmogorov-Smirnov test was used for distribution analysis. Comparisons were performed by Chi-square test for qualitative variables and Student's t-test or Mann Whitney U test for quantitative variables. A p value <0.05 was considered statistically significant.
Results: In electrocardiogram findings, a significant difference was found in QRS segment duration (84.00 vs 89.50 ms, p=0.012), QT segment duration (397.01 vs 384.44 ms, p=0.016) and heart rate (68.60 vs 74.77, p=0.03) (Table 1).

Table 1. ECG comparison between SLE and controls.

Characteristics	Pacientes with SLE (n=70)	Controls (n=70)	*P*
Age (years), median (p25-p75)	35.0 (25.0-50.2)	35.0 (22.7-50.2)	NS
Female, n (%)	63 (90)	64 (91.4)	NS
QRS (ms), median (p25-p75)	89.50 (84.75-95.50)	84.00 (80.00-90.00)	0.012
QT (ms), mean ± SD	384.44 ± 30.84	397.01 ± 30.21	0.016
HR (Bpm), mean ± SD	74.77 ± 12.93	68.60 ± 11.25	0.003

ECG; electrocardiogram, SLE; systemic lupus erythematosus, NS; not significant, HR; heart rate, MS; milliseconds, BPM; beats per minute.

Conclusion: The results suggest that patients with SLE have increased QRS segment, increased heart rate and decreased QT segment duration, which may be related to disturbances of the conduction system.

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Disclosure of Interests: None declared
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AB0520 ASSOCIATION BETWEEN LEFT VENTRICULAR MASS INDEX AND BODY WEIGHT IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

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Background: Rheumatoid cachexia is a clinical spectrum of rheumatoid arthritis in which individuals present increased inflammatory activity, more aggressive joint destruction, and worse cardiovascular prognosis (1). Systemic lupus erythematosus (SLE) is a chronic, inflammatory, autoimmune disease in which there is a high cardiovascular mortality rate (2). Currently, the cachexia phenomenon in SLE patients has not been studied.
Objectives: To correlate body weight with left ventricular (LV) indexed mass in SLE patients.
Methods: This was a cross-sectional study that included a total of 34 patients aged ≥18 years with a diagnosis of SLE according to EULAR/ACR 2019 criteria. Patients with a personal pathological history of cardiovascular disease (myocardial infarction, stroke, or peripheral arterial disease) and pregnancy were excluded. Three certified cardiologists performed a transthoracic echocardiogram in each patient, assessing relative wall thickness, and indexed LV mass. The distribution was assessed with Kolmogorov-Smirnov. Correlations between weight and echocardiographic parameters with Spearman-rho coefficient. A value of p<0.05 was considered statistically significant.
Results: Most patients were female (94.1%), with a mean age of 33.29±9.91. Of the total patients 2 (5.88%) had Type 2 Diabetes Mellitus, 2 (5.88%) hypertension, 1 (2.94%) dyslipidemia, 3 (8.82%) obesity, and 6 (17.64%) smoking. Spearman-rho coefficient showed a significant negative correlation between LV indexed mass and body weight of SLE patients (rho=-0.411, *p*=0.016) (Figure 1).

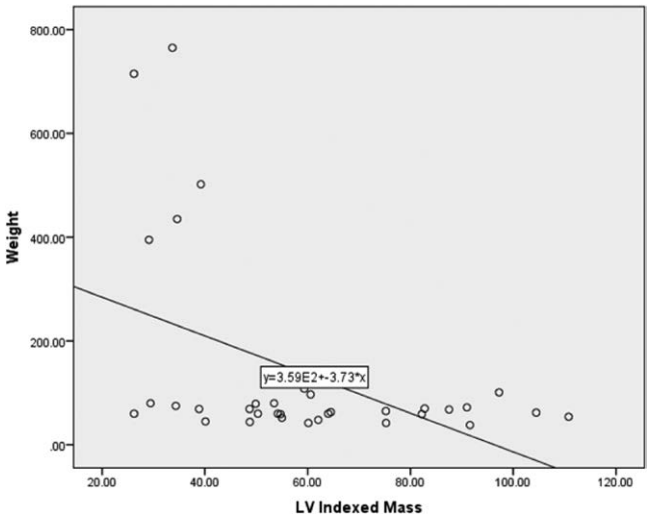

Figure 1. Spearman rho correlation between weight and LV indexed mass.