Conclusion: The analysis shows that average percent fat is a statistically significant predictor for BMD at different anatomical locations, and a larger predictor in the spine, compared to a decline at the hip. Further research is needed to characterise the relationship more precisely and identify whether there is a causal link.

References:

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.2170

SAT0486

BONE MINERAL DENSITY IN PATIENT WITH SHRUNKEN PORE SYNDROME IS SIGNIFICANTLY LOWER THAN THAT IN PATIENT WITHOUT, HOWEVER SERUM PARATHYROID HORMONE DOES NOT CORRELATED MUCH WITH IT

I. Yoshii1, S. Nishiyama2. 1Yoshii Hospital, Rheumatology and Musculoskeletal Medicine, Shimanto-City, Japan; 2Kurashiki Medical Center, Rheumatic Disease Center, Kurashiki, Japan

Background: Shrunken pore syndrome (SPS), defined by cystatin C (CysC) based estimated glomerular filtration rate (eGFR CysC) < 60% of creatinine (Cr) based eGFR (eGFR Cr) in the absence of extrarenal influences on the plasma levels of CysC or Cr, is associated with a higher increase in mortality. SPS often causes reduced bone mineral density (BMD).

Objectives: In this study, relationship between BMD and SPS was investigated.

Methods: Patient with rheumatic diseases who were measured BMD with dual-energy X-ray absorptiometry at the same time, CysC and Cr were also measured, were picked up. eGFR CysC and eGFR Cr were calculated, and a patient group with SPS were recruited. Relationship between serum PTH and CysC, or Cr was evaluated with univariate linear regression analysis. Between the SPS groups and the other patient group, statistical difference was evaluated regarding sex, age, Cr, CysC, serum Cr-CysC ratio (Cr/CysC), serum calcium corrected with albumin (Ca), creatinine phosphokinase (CPK), parathyroid hormone (PTH), eGFR CysC, eGFR Cr, BMD in the lumbar spine (BMD LS) and femoral neck (BMDFN) were evaluated with Mann-Whitney U-test. Relationship between SPS for each bone and sex, age, PTH, Cr/CysC, eGFR CysC, and being SPS was statistically evaluated with multivariate linear regression analysis. Further, sensitivity and specificity regarding being SPS for T-score < -2.5, that is defined as diagnosis criteria of osteoporosis calculated from BMD, was evaluated with chi square test.

Table 1. Number of patients who were picked up in the study

<table>
<thead>
<tr>
<th>Diseases</th>
<th>Number of patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA</td>
<td>512</td>
</tr>
<tr>
<td>PsA</td>
<td>110</td>
</tr>
<tr>
<td>SJS</td>
<td>67</td>
</tr>
<tr>
<td>SLE</td>
<td>68</td>
</tr>
<tr>
<td>PPP</td>
<td>17</td>
</tr>
<tr>
<td>AS</td>
<td>16</td>
</tr>
<tr>
<td>SSc</td>
<td>13</td>
</tr>
<tr>
<td>OA</td>
<td>11</td>
</tr>
<tr>
<td>Behcet</td>
<td>8</td>
</tr>
<tr>
<td>PMDM</td>
<td>3</td>
</tr>
<tr>
<td>MD</td>
<td>2</td>
</tr>
<tr>
<td>FNF</td>
<td>2</td>
</tr>
<tr>
<td>PAN</td>
<td>1</td>
</tr>
<tr>
<td>total</td>
<td>819</td>
</tr>
</tbody>
</table>

Results: A total of 819 participants with 75 males and 744 females joined. Patient with SPS counted 31 and without SPS counted 782. Underlying diseases are shown in Table 1. Average age, CysC, Cr, PTH, eGFR CysC, and eGFR Cr were 75.5, 1.18, 0.76, 42.1, 66.2 and 53.0, respectively. PTH significantly correlated with CysC (p<0.015), but not correlated with Cr (p=0.079). SPS demonstrated significantly higher ratio for being male (p<1.0x10-5), higher age (p=1.07x10-4), higher titer of Cr (p=5.5x10-5), lower titer of Cr/CysC (p=1.5x10-4), lower Cr/CysC (p=2.8x10-4), BMD LS (p=1.0x10-5) and BMD_FN (p=1.0x10-5), however no significant difference demonstrated for Cr (2.4x10-7), PTH (p=1.7x10-1) and Ca (p=6.3x10-1). BMD LS demonstrated significant positive correlation with PTH (p=6.4x10-4), and negative correlation with being female (p=4.9x10-1), age (p=2.1x10-4), eGFR CysC (p=2.5x10-4) and being SPS (p=4.9x10-4), while BMD_FN demonstrated significant positive correlation with Cr/CysC (p=7.3x10-4), and negative correlation with being female (p=1.5x10-3), age (p=9.9x10-4) and being SPS (7.3x10-3). Sensitivity and specificity of T-score < -2.5 in the LS regarding SPS was 50.0% and 74.0% (p=6.9x10-3), while in the FN 67.9% and 61.7% (p=1.7x10-3), respectively.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.2170

SAT0487

PREDICTIVE BIOMARKERS OF IGA VASCULITIS WITH NEPHRITIS BY METABOLIC ANALYSIS

S. Demir1, M. Celebiier2, O. Kaplan2, E. Sag3, Y. Bilginer3, S. Ozen4. 1Hacettepe University Faculty of Medicine, Department of Pediatric Rheumatology, Ankara, Turkey; 2Hacettepe University Faculty of Pharmacy, Department of Analytical Chemistry, Ankara, Turkey

Background: IgA vasculitis/ Henoch Schönlein Purpura (IgAV/HSP) is the most common vasculitis of childhood and renal involvement is the most serious long-term complication. A better understanding of the pathophysiology of the progression to kidney disease is required for better treatment to be achieved and current biomarkers of IgA vasculitis with nephritis (IgAVN) lack the predictive value.

Objectives: In this study, an untargeted metabolomics approach was performed to reveal the underlying molecular mechanism of disease pathogenesis and to find potential biomarkers of plasma samples from patients with IgAV and IgAVN.

Methods: IgAV/HSP was diagnosed according to the Ankara criteria in 2008 (1). Forty-five patients, including 39 active IgAV patients (H), 6 IgAVN (N), and 6 age- and

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.1618

SAT0488

PREDICTIVE BIOMARKERS OF IGA VASCULITIS WITH NEPHRITIS BY METABOLIC ANALYSIS

S. Demir1, M. Celebiier2, O. Kaplan2, E. Sag3, Y. Bilginer3, S. Ozen4. 1Hacettepe University Faculty of Medicine, Department of Pediatric Rheumatology, Ankara, Turkey; 2Hacettepe University Faculty of Pharmacy, Department of Analytical Chemistry, Ankara, Turkey

Background: IgA vasculitis/ Henoch Schönlein Purpura (IgAV/HSP) is the most common vasculitis of childhood and renal involvement is the most serious long-term complication. A better understanding of the pathophysiology of the progression to kidney disease is required for better treatment to be achieved and current biomarkers of IgA vasculitis with nephritis (IgAVN) lack the predictive value.

Objectives: In this study, an untargeted metabolomics approach was performed to reveal the underlying molecular mechanism of disease pathogenesis and to find potential biomarkers of plasma samples from patients with IgAV and IgAVN.

Methods: IgAV/HSP was diagnosed according to the Ankara criteria in 2008 (1). Forty-five patients, including 39 active IgAV patients (H), 6 IgAVN (N), and 6 age- and

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.1618

SAT0488

PREDICTIVE BIOMARKERS OF IGA VASCULITIS WITH NEPHRITIS BY METABOLIC ANALYSIS

S. Demir1, M. Celebiier2, O. Kaplan2, E. Sag3, Y. Bilginer3, S. Ozen4. 1Hacettepe University Faculty of Medicine, Department of Pediatric Rheumatology, Ankara, Turkey; 2Hacettepe University Faculty of Pharmacy, Department of Analytical Chemistry, Ankara, Turkey

Background: IgA vasculitis/ Henoch Schönlein Purpura (IgAV/HSP) is the most common vasculitis of childhood and renal involvement is the most serious long-term complication. A better understanding of the pathophysiology of the progression to kidney disease is required for better treatment to be achieved and current biomarkers of IgA vasculitis with nephritis (IgAVN) lack the predictive value.

Objectives: In this study, an untargeted metabolomics approach was performed to reveal the underlying molecular mechanism of disease pathogenesis and to find potential biomarkers of plasma samples from patients with IgAV and IgAVN.

Methods: IgAV/HSP was diagnosed according to the Ankara criteria in 2008 (1). Forty-five patients, including 39 active IgAV patients (H), 6 IgAVN (N), and 6 age- and

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.1618