largest proportion of 33 (75%) patients with decreased BMD was found in the group of patients with duration of the disease from 5 to 10 years. In the group of patients with duration of the disease up to 5 years, patients with decrease in the Z-score were 11 (56%), and in the group with duration of the disease more than 10 years - 17 (41.6%) patients. Decrease of BMD was associated with cumulative glucocorticoid dose. In particular, in the group of patients with a cumulative dose of glucocorticoids less than 12.6 g Z-score at the level of the lumbar spine was -0.98 ± 0.17 SD, in the group with a cumulative dose of GC 12.6-21.6 g Z-score was equal to -0.43 ± 0.40 SD, and in the group with cumulative glucocorticoid dose ≥21.6 g the Z-score was -1.69 ± 0.30 SD. As the glucocorticoid dose increased, the proportion of patients with decreased BMD increased. In the group of patients with the highest dose of GC there were 67.7% such patients, while in the group with the lowest dose – only 30 (57.6%). Significant correlation (r = -0.24) was established between Z-score of the lumbar spine and the total dose of GC.

**Conclusion:** In 61 (56.5%) patients with AS decreased BMD at the level of the lumbar spine and neck of the femur is revealed. Decrease of BMD in patients with AS is not dependent on age and duration of the disease, but is associated with the cumulative dose of GC.

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**AB0715**

**POSSIBLE METHODS OF EARLY DIAGNOSIS OF RENAL ALTERATION IN PATIENTS WITH ANKYLOSING SPONDYLITIS**

L. Plenkina, O. Cimmino\(^2\), V. Rozinova\(^3\), Kirov State Medical University, Kirov, Russian Federation; \(^1\)Kirov State Medical University, Kirov, Russian Federation

**Background:** kidney damage is one of the extrarticular manifestations and complications of ankylosing spondylitis (AS). Due to some disadvantages of traditional renal function parameters, the search for new markers is actively conducted [1].

**Objectives:** to evaluate urinary excretion of liver type of fatty acid binding protein (L-FABP), which is expressed in cells of proximal tubules, heart type of fatty acid binding protein (H-FABP), which is expressed in cells of distal tubules [2], and trefoil factor-3 (TFF-3), which is expressed in cells of the proximal and distal tubules and collecting duct [3], in patients with AS.

**Methods:** urine samples of 50 patients (37 males, 13 females) were evaluated. Patient inclusion criteria were a diagnosis of AS according to the New York modified criteria (1984) and ASAS 2009 (The Assessment of SpondyloArthritis international Society, 2009) for axial spondyloarthritis and age 18 and over. Median age of patients was 39 [34;56] years, duration of joint syndrome – 10 [7;18] years, glomerular filtration rate (GFR) - [105 [83;119] ml/min/1.73 m\(^2\)]. Patients received nonsteroidal anti-inflammatory drugs (NSAIDs), and tumor necrosis factor alpha inhibitors (TNFs inhibitors). L-FABP, H-FABP, TFF-3 levels were measured by enzyme-linked immunosorbent assay. Urinary excretion was expressed as nano-grams per milliliter of urinary creatinine. The results were compared with the results of the control group.

**Results:** the values of L-FABP in patients with AS without chronic kidney disease (CKD) exceeded the values in the control group: 0.05 [0.01;0.09] ng/ml creatinine compared to 0.03 [0.00;0.06] ng/ml, (p=0.04). H-FABP was detected in only 6 patients, all of them were with CKD. Its level was up to 601.50 ng/ml. H-FABP level was undetectable in the control group. The level of TFF-3 in patients without CKD was higher than in the control group: 53.42 [20.84;105.71] and 23.31 [9.76;62.90] ng/ml, respectively, (p=0.02). A correlation with disease activity (BASDAI and ASDAS) was found for TFF-3 (r=0.33, p<0.05). This marker in patients receiving NSAIDs is higher compared with TNF\(a\) inhibitors: 89.51 [39.82;118.91] and 32.61 [13.51;88.23] ng/ml, respectively, (p<0.04). L-FABP and TFF-3 correlated with each other (r=0.6, p<0.05). The level of FABPs and TFF-3 did not depend on sex, age, GFR and AS duration.

**Conclusion:** L-FABP and TFF-3 may be of interest for diagnosis pre-clinical renal alteration, including those associated with the NSAIDs toxicity, in patients with AS. L-FABP and H-FABP may be useful in determining stages and levels of tubular injury.

**References:**


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**Table 1.** Association of sex with radiographic progression in spine and sacroiliac joints after 2 years of follow-up.

<table>
<thead>
<tr>
<th>Parameter, n(%) or mean±SD</th>
<th>Female (n=103)</th>
<th>Male (n=107)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spinal radiographic progression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mSASSS change</td>
<td>0.46 ± 1.63</td>
<td>1.00 ± 2.85</td>
</tr>
<tr>
<td>Progression of mSASSS by ≥2 points</td>
<td>10 (9.7)</td>
<td>20 (18.7)</td>
</tr>
<tr>
<td>New syndesmophytes or progression of syndesmophytes</td>
<td>10 (9.7)</td>
<td>23 (21.5)</td>
</tr>
<tr>
<td>Progression of radiographic sacroiliitis</td>
<td>17 (16.5)</td>
<td>9 (8.4)</td>
</tr>
<tr>
<td>Change of the sacroiliitis sum score</td>
<td>0.14 ± 0.94</td>
<td>0.13 ± 0.73</td>
</tr>
<tr>
<td>Progression of sacroiliitis by at least 1 grade in opinion of both readers</td>
<td>0.58</td>
<td>0.09</td>
</tr>
</tbody>
</table>

mSASSS – modified Stoke Ankylosing Spondylitis Spine Score;

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