There was no correlation between the total Power Doppler (PD) score in Sjögren’s syndrome (SS) patients for assessment of arthritis in clinical practice. A valid and reliable tool for diagnosis and management of inflammatory arthritis is needed to establish if the development of erosions could be prevented by early diagnosis and monitoring using US, with prompt treatment of inflammatory arthritis associated with SLE and SS.

**Disclosures:** The authors have declared no conflicts of interest.

**Table 1:**

<table>
<thead>
<tr>
<th></th>
<th>SLE (n=18)</th>
<th>SS (n=23)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (mean +/- SD)</td>
<td>45.7 +/- 12</td>
<td>51.4 +/- 14</td>
<td>0.183</td>
</tr>
<tr>
<td>Gender (% females)</td>
<td>94.4</td>
<td>100</td>
<td>0.254</td>
</tr>
<tr>
<td>Disease duration</td>
<td>168.5 +/-177.1</td>
<td>106.9 +/-118.1</td>
<td>0.211</td>
</tr>
<tr>
<td>% patients on steroids</td>
<td>44.4</td>
<td>4.3</td>
<td>0.002</td>
</tr>
<tr>
<td>% patients on cDMARDs</td>
<td>88.9</td>
<td>52.2</td>
<td>0.012</td>
</tr>
<tr>
<td>% patients on Rituximab</td>
<td>11.1</td>
<td>8.7</td>
<td>0.795</td>
</tr>
<tr>
<td>% ANA</td>
<td>77.8</td>
<td>34.8</td>
<td>0.006</td>
</tr>
<tr>
<td>% dsDNA</td>
<td>27.8</td>
<td>13</td>
<td>0.238</td>
</tr>
<tr>
<td>% ENA</td>
<td>55.6</td>
<td>56.5</td>
<td>0.952</td>
</tr>
<tr>
<td>CRP (mean +/- SD)</td>
<td>4.98 +/- 4.17</td>
<td>4.69 +/- 6.04</td>
<td>0.871</td>
</tr>
<tr>
<td>ESR (mean +/- SD)</td>
<td>31.41 +/- 26.11</td>
<td>23.35 +/- 19.79</td>
<td>0.273</td>
</tr>
<tr>
<td>SJC (mean +/- SD)</td>
<td>3.29 +/- 4.29</td>
<td>2.24 +/- 6.11</td>
<td>0.580</td>
</tr>
<tr>
<td>TCJ (mean +/- SD)</td>
<td>7.69 +/- 7.96</td>
<td>6.20 +/- 7.68</td>
<td>0.580</td>
</tr>
<tr>
<td>Total PD score (mean +/- SD)</td>
<td>1.35 +/- 2.7</td>
<td>0.52 +/- 1.68</td>
<td>0.240</td>
</tr>
<tr>
<td>Total Grey scale score (mean +/- SD)</td>
<td>2.167 +/-14.67</td>
<td>1.409 +/-4.68</td>
<td>0.012</td>
</tr>
<tr>
<td>% patients with active arthritis</td>
<td>27.8</td>
<td>21.7</td>
<td>0.653</td>
</tr>
<tr>
<td>% patients with osteophytes</td>
<td>61.1</td>
<td>60.9</td>
<td>0.984</td>
</tr>
<tr>
<td>% patients with erosions</td>
<td>55.6</td>
<td>34.8</td>
<td>0.184</td>
</tr>
</tbody>
</table>

155 THE ROLE OF MUSCULOSKELETAL ULTRASOUND AS A DIAGNOSTIC AND MANAGEMENT TOOL FOR ASSESSMENT OF INFLAMMATORY ARTHRITIS ASSOCIATED WITH SYSTEMIC LUPUS ERYTHEMATOSUS AND SJÖGREN’S SYNDROME PATIENTS

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**Background:** Musculoskeletal ultrasound (US) is increasingly used as a valid and reliable tool for diagnosis and management of inflammatory arthritis. However, its use in systemic lupus erythematosus (SLE) and Sjögren’s syndrome (SS) patients for assessment of arthritis in clinical practice remains less established.

**Objectives:** To analyse a real life cohort of SLE and SS patients referred for US assessment of their hand joints in the context of clinical symptoms of arthralgia/arthritis, to review their characteristics and correlate US findings with clinical and laboratory markers, and disease activity scores (musculoskeletal ESSDAI and BILAG respectively).

**Methods:** We performed a cross-sectional study of patients with SLE and SS referred to our US clinic in the last year. The OMERACT US scoring system was used to assess patients’ wrists, metacarpophalangeal and proximal interphalangeal joints bilaterally.

**Results:** Patient characteristics and differences between ultrasound findings in SLE (n=18) and SS (n=23) patients are shown in Table 1. There was no correlation between the total Power Doppler (PD) score and musculoskeletal BILAG and ESSDAI scores (R = 0.36, P = 0.12, and R = 0.32, P = 0.13, respectively). Similarly, there was no correlation between the total Grey Scale score (assessing the degree of synovial hypertrophy) with either musculoskeletal BILAG or ESSDAI scores (R = 0.41, P = 0.09, and R = 0.084, P = 0.7, respectively). Interestingly, more than one in two SLE patients had erosions, while more than one in three had erosions in the SS group. Active synovitis was found in 27.8% of SLE and 21.7% of SS patients. US assessment prompted treatment changes (including both optimisation of immunosuppressive therapy or analgesia alone based on the results of the scan) in up to 61% of SLE patients and in 35% of SS patients, who would have otherwise not had their treatment changed based on BILAG/ESSDAI scores alone.

**Conclusion:** US examination was proven superior to clinical examination and blood test results for optimising the management of hand arthralgia/arthritis associated with SLE and SS. Future research is needed to establish if the development of erosions could be prevented by early diagnosis and monitoring using US, with prompt treatment of inflammatory arthritis associated with SLE and SS.

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