Background: Ultrasound (US) detected subclinical synovitis can be present in early psoriatic arthritis (PsA) and rheumatoid arthritis (RA), and also in patients fulfilling clinical remission criteria[1-2]. Numerous evidences support that the persistence of subclinical synovitis detected by US is associated with a high risk of disease progression [2-3].

Objectives: To evaluate sub-clinical synovitis of PsA and RA at the level of small joints of the hand and wrist by B-mode and Power Doppler US.

Methods: 21 patients of early PsA and 25 patients of early RA (no clinical evidence of hand joint involvement, PsA disease duration < 2 years, and RA disease duration < 1 year) were recruited. DAS28 and DAPSA score used for assessment of articular disease activity for RA and PsA, respectively. US (grey scale (GS) and power Doppler (PD)) was performed to assess synovitis of bilateral wrists, metacarpophalangeal joints, proximal and distal interphalangeal joints, altogether 30 joints. A GS score ≥2 and/or a PD score ≥1 were used to identify US detected synovitis.

Results: A total of 25 patients were included in the RA group, including 5 males and 20 females. A total of 21 patients were included in the PsA group, including 7 males and 14 females. There were no significant differences in gender composition, age, and duration of disease between the two groups (P > 0.05) (Table 1). 14 (66.67%) PsA patients and 12 (48%) RA patients had sub-clinical hand joint synovitis. Among 630 hand joints scanned in PsA group, 49 (7.78%) joints showed evidence of sub-clinical synovitis. Wrist joint was most commonly involved (24.4%), followed by MCP3 (14.29%), MCP1 (12.2%), and DIP3 (10.20%). Among 750 hand joints scanned in RA group, 110 (14.67%) joints showed evidence of sub-clinical synovitis. Wrist joint was most commonly involved (60.00%), followed by MCP3 (8.24%), MCP1 (8.24%) and MCP2 (7.06%). No correlation noted between numbers of joints with subclinical synovitis with DAPSA and DAS28 score. There was no correlation between number of joints with sub-clinical synovitis and disease activity indices.

Conclusion: Almost two-thirds patients with PsA and half patients with RA had US evidence of sub-clinical synovitis in wrist and hand joints, most commonly in wrist. There are some similarities in the joint involvement of sub-clinical synovitis between RA and PsA, physicians should take this into account in clinical work.

Table 1. Demographic characteristics of RA and PsA patients

<table>
<thead>
<tr>
<th></th>
<th>RA (n=25)</th>
<th>PsA (n=21)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female, (%)*</td>
<td>20 (80.00%)</td>
<td>14 (66.67%)</td>
<td>0.305</td>
</tr>
<tr>
<td>Age, years, mean±SD</td>
<td>56.32±12.18</td>
<td>54.31±15.82</td>
<td>0.637</td>
</tr>
<tr>
<td>Disease duration, years, mean±SD</td>
<td>1.06±0.59</td>
<td>0.90±0.58</td>
<td>0.363</td>
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</tbody>
</table>

REFERENCES:

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