The association between peripheral enthesitis scores and nailfold videocapillaroscopy findings in patients with psoriatic arthritis

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Background: Enthesitis is one of the key features of psoriatic arthritis (PsA), it is usually overlooked in the asymptomatic patients. Nail disease often precedes PsA and nailfold videocapillaroscopy (NVC) is a useful technique for evaluating changes in microcirculation of nail that is considered to play an important role for early detection of enthesitis and PsA [1-3].

Objectives: To investigate the link between NVC findings and severity of peripheral enthesitis scores in patients with PsA.

Methods: In this cross-sectional single center study, 34 consecutive PsA patients and as control group (healthy controls - HC), 22 subjects without rheumatic diseases were involved. Psoriasis area severity index (PASI) was used to express severity of psoriasis (Ps) and percentage of affected area. Leeds enthesitis index (LEI) comprised assessment of lateral epicondyles of humerus, medial condyles of femur, and the insertion of the Achilles tendon. Madrid Sonographic Enthesitis Index (MASEI) was applied to quantify the extent of sonographic enthesal abnormalities. MASEI-inflammation, MASEI-damage and as a sum of these MASEI-total scores were recorded. NVC was performed on eight fingers in each subject.

Results: We enrolled 34 patients with PsA (median age=47.74 years, median disease duration=6.91 years) and 22 HC (median age=46.77 years). There were no significant differences between two groups concerning age, gender distribution and body mass index. Ps and PsA disease duration in terms of years were not correlated with MASEI and NVC scores. PASI score associated with MASEI-inflammatory score (r=0.40, p=0.01). There were significant correlation between the NVC score and MASEI-inflammatory (r=0.53, p=0.001) and MASEI-total scores (r=0.35, p=0.04) (Table 1). No association was found between LEI and NVC scores (p=0.34). MASEI enthesitis and NVC scores were significantly higher in the patient group (p=0.00).

Table 1. Correlation between the capillaroscopy findings and MASEI-inflammatory and MASEI-total scores in patients with psoriatic arthritis

<table>
<thead>
<tr>
<th>MASEI</th>
<th>Capillaroscopy</th>
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<tr>
<td></td>
<td>PsA</td>
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<tr>
<td>MASEI-inflammatory</td>
<td></td>
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<tr>
<td>r</td>
<td>0.53**</td>
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<tr>
<td>p</td>
<td>0.001</td>
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<tr>
<td>MASEI-total</td>
<td></td>
</tr>
<tr>
<td>r</td>
<td>0.35*</td>
</tr>
<tr>
<td>p</td>
<td>0.04</td>
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</tbody>
</table>

Spearman's Correlation Coefficient: ** Correlation is significant at the 0.01 level (2-tailed), * Correlation is significant at the 0.05 level (2-tailed).
p<0.05 statistic significance

MASEI: Madrid Sonographic Enthesitis Index, PsA: psoriatic arthritis, HC: healthy controls

Conclusion: NVC may objectively reflect the peripheric enthesopathy severity and give opportunity for early diagnosis of PsA.

References:

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in the dorsal and palmar view at wrist, MCP, PIP and DIP 2-5 joint levels for synovitis and tenosynovitis.

Subsequently, a comparison of the findings in the affected joints was performed using US as the reference method. Furthermore, AUC was calculated to show the extent to which a new joint inflammation was associated with a change in diagnosis.

Results: Of the 60 patients initially examined (1), 30 patients (dropout rate 50%) were followed-up approximately 3 years later. The patients were newly divided into 3 groups: Diagnosed PsA (n=14, Group I), still suspected PsA (n=10, Group II) and initially suspected PsA (n=20, Group III). Patients with a change in the diagnosis from suspected to diagnosed PsA (Group III) showed a significantly increased prevalence of joints with pathological findings in FOI (46% at baseline, 88% at follow-up; p=0.046), with an unchanged joint distribution pattern, i.e. with a dominant involvement of the DIP joints. Compared to baseline, patients of group III were three times more common to show enrichment in p3 US at follow-up (1.7% vs. 70%; p<0.001).

Newly detected joint erosions by FOI (PVM, p2) and PsA (p3) at follow-up were positively associated with the change of diagnosis from suspected PsA to confirmed PsA (FOI: AUC 0.78, GSUS: AUC 0.77). Using US in greyscale as reference, inflammatory changes in the joints were diagnosed in all 3 cohorts by means of FOI in P1 and P3 with high specificity (Group III: 90.6%, Group II: 97.5%, Group I: 94.2%) and low sensitivity (Group III: 24.4%, Group II: 20.3%, Group I: 19.6%).

Conclusion: FOI appears to be helpful to differentiate between acute and chronic disease stages. Furthermore, it is specific for detecting inflammatory changes in the joints of the hands in PsA – in comparison to US. FOI could thereby become a helpful tool as a “dermatological-screening” method to select psoriasis patients with indication for further rheumatological evaluation.

References:

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SAT0408
UTILITY OF CAROTID ULTRASOUND AND FRAMINGHAM RISK SCORE ON DISCRIMINATING CORONARY ARTERY DISEASE IN PATIENTS WITH PSORIATIC ARTHRITIS (PSA)


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Background: While carotid ultrasound (US) has been advocated for cardiovascular (CV) risk screening in patients with rheumatoid arthritis as various traditional scores underestimates CV risk, whether subclinical carotid atherosclerosis (SCA) is associated with coronary atherosclerosis on coronary computed tomography angiography (CCTA) in patients with psoriatic arthritis (PsA) remains uncertain.

Objectives: This study aimed to identify carotid US parameters which can discriminate PsA patients with coronary artery disease (CAD) and obstructive CAD (O-CAD), and determine the utility in combination with Framingham Risk Score (FRS).

Methods: Ninety-one PsA patients (56 males; age: 50±11 years, disease duration: 9.4±3.2 years) without overt CV diseases were recruited. Carotid intima-media thickness (cIMT), presence of plaque and total plaque area (TPA) were assessed. FRS was calculated to determine the presence of any coronary plaque on CCTA. O-CAD was defined as >50% stenosis of the lumen. FRS <10% indicates low CV risk, 10–19% indicates intermediate risk while ≥20% indicates high risk (1).

Results: Thirty-five (38%) patient had carotid plaque. Fifty-five (60%) patients had O-CAD (Group I: 94.2%), and low sensitivity (Group III: 24.4%, Group II: 20.3%, Group I: 19.6%).

Conclusion: Using US as the reference method. Furthermore, AUC was calculated to show the extent to which a new joint inflammation was associated with a change in diagnosis.

Results: Of the 60 patients initially examined (1), 30 patients (dropout rate 50%) were followed-up approximately 3 years later. The patients were newly divided into 3 groups: Diagnosed PsA (n=14, Group I), still suspected PsA (n=10, Group II) and initially suspected PsA (n=20, Group III). Patients with a change in the diagnosis from suspected to diagnosed PsA (Group III) showed a significantly increased prevalence of joints with pathological findings in FOI (46% at baseline, 88% at follow-up; p=0.046), with an unchanged joint distribution pattern, i.e. with a dominant involvement of the DIP joints. Compared to baseline, patients of group III were three times more common to show enrichment in p3 US at follow-up (1.7% vs. 70%; p<0.001).

Newly detected joint erosions by FOI (PVM, p2) and PsA (p3) at follow-up were positively associated with the change of diagnosis from suspected PsA to confirmed PsA (FOI: AUC 0.78, GSUS: AUC 0.77). Using US in greyscale as reference, inflammatory changes in the joints were diagnosed in all 3 cohorts by means of FOI in P1 and P3 with high specificity (Group III: 90.6%, Group II: 97.5%, Group I: 94.2%) and low sensitivity (Group III: 24.4%, Group II: 20.3%, Group I: 19.6%).

Conclusion: FOI appears to be helpful to differentiate between acute and chronic disease stages. Furthermore, it is specific for detecting inflammatory changes in the joints of the hands in PsA – in comparison to US. FOI could thereby become a helpful tool as a “dermatological-screening” method to select psoriasis patients with indication for further rheumatological evaluation.

References:

SAT0409
BIOLOGIC TREATMENT IN PSORIATIC ARTHRITIS AND AXIAL SPONDYLOARTHROPATHY REDUCES SICKNOTES ISSUED BY GPS, DESPITE DELAYS IN DIAGNOSIS: A REAL-LIFE STUDY IN WALES.

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