(15%) and contributed in the diagnosis of neoplastic processes in 5 (4.8%). Table 2 shows the final diagnoses.

When analyzing the results of PET in patients with onset PMR vs. those who are corticosteroid resistant, no significant differences were observed in the final diagnoses (p = 0.078).

Table 1. Patient’s features

<table>
<thead>
<tr>
<th>Women, n (%)</th>
<th>73 (70.9%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease duration (months), mean ± SD</td>
<td>24 ± 41.92</td>
</tr>
<tr>
<td>Shoulder pain, n (%)</td>
<td>100 (97.1%)</td>
</tr>
<tr>
<td>Hip pain, n (%)</td>
<td>89 (86.4%)</td>
</tr>
<tr>
<td>Amarnath, n (%)</td>
<td>5 (4.9%)</td>
</tr>
<tr>
<td>Temporal artery tenderness, n (%)</td>
<td>2 (1.9%)</td>
</tr>
<tr>
<td>ESR (mm/h), mean ± SD</td>
<td>55.92 ± 31.09</td>
</tr>
</tbody>
</table>

Table 2. Diagnoses

<table>
<thead>
<tr>
<th>TOTAL</th>
<th>Onset PMR</th>
<th>Cortico- resistant PMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMR, n (%)</td>
<td>73 (70.9)</td>
<td>37 (50.7)</td>
</tr>
<tr>
<td>Large vessel vasculitis, n (%)</td>
<td>16 (15.5)</td>
<td>6 (10.2)</td>
</tr>
<tr>
<td>Neoplasia, n (%)</td>
<td>5 (4.8)</td>
<td>5 (10.0)</td>
</tr>
<tr>
<td>EORA associated PMR, n (%)</td>
<td>6 (5.8)</td>
<td>2 (4.0)</td>
</tr>
</tbody>
</table>

Conclusion: PET-CT confirms the diagnosis of PMR in the significant majority of patients included in the study. In this cohort, PET-CT allowed to diagnose vasculitis of large vessels and neoplasms in 16% and 5% of the patients respectively. We did not observe differences in the PET findings in those patients who underwent a PET at the time of diagnosis vs. those who are corticosteroid resistant.

REFERENCES:

Disclosure of Interests: Maria Emilia Corica: None declared, Patricia Moya: None declared, Alejandro Fernandez: None declared, Berta Magal-laeres: None declared, Ignasi Gich: None declared, Ana Milena Millan Arci-niegas: None declared, HyoSang Park: None declared, Monica Paola Sarmiento: None declared, Ana Laiz Consultant for: Lilly, Novartis, AbvVie, MSD, UCB and Janssen, Speakers bureau: Lilly, Novartis, AbvVie, MSD, UCB and Janssen, Cesar Diaz-Torné: None declared, Josep Maria Libret: None declared, Ivan Castelví Consultant for: I received fees less than 5000USD as a consultant for Kem and Actelion, Paid instructor for: I received fees less than 2000USD as an instructor for Boehringer-Ingelheim, Novartis and Gebro, Speakers bureau: ND, Hector Corominas: None declared


THU0605 SHEAR WAVE ELASTOGRAPHY MUSCLE STIFFNESS MAY DIMINISH AFTER CORTICOSTEROID TREATMENT

Abdulfattah M. Aljunied1,2,3, Al Lyn Tan2,3, Philip O’Connor2, Paul Emery2,3, Richard Wakefield2,3, Priya Satin1,2, Abdullahzaz University, Aljunied Medical Imaging, Khaz, Saudi Arabia; 1University of Leeds, Leeds Institute of Rheumatic and Musculoskeletal Medicine, Leeds, United Kingdom; 2Leeds Teaching Hospitals NHS Trust, Leeds Biomedical Research Centre, Leeds, United Kingdom

Background: The use of corticosteroids is associated with several adverse effects including corticosteroid-induced myopathy (CIM). CIM may cause structural alterations to the myofibres, which support the hypothesis of altered muscle stiffness as seen in histological and preclinical studies [1,2]. Shear wave elastography is an ultrasound technology that can quantify tissue stiffness non-invasively.

Objectives: To investigate the changes in muscle stiffness as measured by SWE and muscle strength tests in giant cell arteritis (GCA) patients exposed to high doses (40–60 mg/day) of corticosteroid treatment.

Methods: Fourteen GCA patients (4 males, mean age 68.2±4.3 years) were recruited and evaluated at baseline, after 3 months and 6 months on prednisolone. Shear wave velocity (SWV), as a surrogate for tissue stiffness, and muscle strength were evaluated at each visit. Baseline data were compared to frequency-matched healthy controls. Linear mixed models were used to analyse the longitudinal data.

Results: The patients did not have a significantly different muscle SWV to healthy controls (all p >0.05) at baseline. However, after 3 months, the quadriceps and hamstrings SWV decreased on average by 14% (range 8.3%–17.3%; p=0.001) and after 6 months decreased by 18% (range 10.2%–25.3%; p=0.001). The biceps brachii SWV did not change with time (p=0.92) (Fig 1). The baseline, 3-months and 6-months mean SWV for the vastus lateralis were 1.62 m/s, 1.40 m/s and 1.31 m/s.
respectively (p<0.001). Muscle strength was generally preserved at follow-up. However, there were moderate to strong correlations (r = 0.54–0.96) between weaker muscle strength at follow-up and greater reduction in SWV.

Figure 1. Muscle stiffness changes in the quadriceps, hamstrings and biceps brachii.

Conclusion: The GCA patients showed a significant loss of muscle stiffness after 3 and 6 months of corticosteroid treatment. With further validation in larger samples, shear wave elastography may be useful for detecting subclinical CIM.

REFERENCES:


Disclosure of Interests: Abdurahman M. Alfuraini: None declared, Al Lyn Tan: None declared, Philip O’Connor: None declared, Paul Emery Grant/ research support from: Pfizer, MSD, AbbVie, Bristol-Myers Squibb, Roche, Consultant for: Pfizer, MSD, AbbVie, Bristol-Myers Squibb, UCB, Roche, Novartis, Gilead,Samsung, Sandoz and Lilly, Richard Wakefield: None declared


THU0607

PROLIFERATIVE GLOBULAR SYNOVITIS, A CHARACTERISTIC ULTRASONOGRAPHIC PATTERN OF SEROPOSITIVE RHEUMATOID ARTHRITIS

Ana Belén Azuaga-Piñango, Beatriz Frade-Sosa, Roberto Gumucio, Katherine Cajiao, Stanislava Mandelikova, Raul Castellanos-Moreira, Virginia Ruiz, Raimón Sanmartí, Juan D. Cañete, Julio Ramirez. Hospital Clinic, Rheumatology, Barcelona, Spain

Background: Rheumatoid Arthritis (RA) and Psoriatic Arthritis (PsA) have a different ultrasound (US) patterns. Synovial changes are characteristic of RA patients and soft tissue changes are more frequently found in PsA. However, no previous studies have analysed if US findings differ between seropositive and seronegative RA patients.

Objectives: To analyse differences in the ultrasound pattern among patients with seropositive and seronegative RA. To assess if proliferative globular synovitis is characteristic of seropositive RA.

Methods: Retrospective Analysis. We collected clinical, epidemiological and ultrasound images of patients with RA who met American College of Rheumatology/European League Against Rheumatism 2010 criteria with bilateral carpal and hand ultrasonography carried out during the last five years. Synovial hypertrophy (SH) and Power Doppler signal (PD) in wrist and hand (1-5 metacarpophalangeal [MCP]) were evaluated. We calculated the SH score (sum of the SH degrees of each joint), PD (sum of the PD degrees of each joint) and the total score (sum of the score of SH and PD) for each patient. We also evaluated the presence of proliferative globular synovitis, defined as big synovial hypertrophy with exophytic growth and a convex upper limit.

Results: 145 RA patients were collected. 80% were women. Mean age was 59.06 (14.8) years and the mean time of disease evolution was 114.6 (112.8) months. 68.3% were RF positive and 74.5% ACPA positive. Overall, 115 of the 145 (79.3%) patients were seropositive for RF/ACPA. 53.1% used traditional disease-modifying drugs (DMARDs), 73.1% used conventional synthetic Disease-modifying drugs (DMARDs), 29.7% biological therapy, and 57.2% low doses of corticosteroids (<5 mg prednisone). The mean DAS28 was 2.81 (1.14), the number of swollen joints was 3 (3.4), and the C reactive protein (CRP) was 0.99 mg/dl (1.6).

No significant differences between seropositive and seronegative patients in terms of disease activity (swollen joints count [SJC], tender joint count [TJC], CRP, DAS28), treatment (use of corticosteroids, DMARDs), biologic, time of evolution and US scores (SH, PD and total scores) were found. Globular synovitis was present in 62% and 13.7% of seropositive and seronegative RA patients, respectively (p<0.0001).

Globally, 75 (51.7%) out of 145 patients had “globular” synovitis by US (Figure 1). 71 out of 75 patients were FR/ACPA positive (94.6%). Only four patients with seronegative RA had this US pattern (p <0.0001). Furthermore, patients with “globular” synovitis had more erosions (72% vs 33%, p <0.0001), higher SJC (3.3 vs 2.5, p = 0.013) and higher SH and PD scores (p<0.0001).

Conclusion: The presence of proliferative globular synovitis was significantly associated with the presence of RF/ACPA in patients with RA. This US pattern identified a subgroup of RA patients with poor prognosis: more erosions and greater inflammatory activity both at clinical and ultrasound level.

REFERENCES: