Background: High sensitivity cardiac troponin T (hs-cTnT) is a biomarker for cardiovascular disease (CVD) in the general population. (1) Psoriatic arthritis (PsA) confers an increased risk for CVD (2) but there are no biological markers to stratify CVD risk in PsA patients.

Objectives: To determine the level of serum hs-cTnT in a PsA cohort and control without inflammatory disease, and further characterize the PsA cohort with detectable hs-cTnT.

Methods: Serum hs-cTnT level was measured with a sandwich immunoassay method in a consecutive PsA cohort (n=96). The control cohort was based on apparently healthy individuals recruited during routine annual health examination, Tel-Aviv Medical Center Inflammatory Survey (TAMCIS) (n=6,052). hs-cTnT was measured with a sandwich immunoassay method in a consecutive PsA cohort (n=96). The control cohort was based on apparently healthy individuals recruited during routine annual health examination, TAMCIS, based on gender, age, BMI, hypertension, and hyperlipidemia prevalence.

Conclusions: hs-cTnT is a novel IFN biomarker associated with the different SLE symptoms II trials in SLE- a prototype IFN mediated disease. We previously confirmed a novel IFN gene scoring system associated with the different SLE symptoms (manuscript in review). Additionally, we also recently validated in two independent cohorts the value of BST2/tetherin as IFN-I biomarker assay correlates with clinical activity and predicts clinical flare in SLE. Given that psoriasis has several SNPs in the IFN pathway; Thus mechanistic studies of the effect of Ustekinumab on the IFN pathway can be explored in this disease setting.

Objectives: This work tested the hypothesis that a novel interferon type I (IFN-I) status markers in the blood and skin of Ustekinumab treated psoriasis patients might correlate with therapy responses and provide insights into how p40 blockers may affect IFN pathways in a relevant human disease model.

Methods: Skin biopsies and peripheral blood at baseline (before therapy, 24weeks, 54 weeks) from 23 Ustekinumab patients with psoriasis who had ultrasound imaging confirmed subclinical enthesopathy were recruited. Cellular immunophenotyping was performed using multi-parameter flow cytometry to detect tetherin (Monocyte, B cells, T cells and neutrophils). All data was compared to age-matched samples from healthy controls (HC). Skin biopsies were digested and RNA extracted, qPCR of common ISGs genes were analysed in lesional and peri-lesional at corresponding time points.

Results: Tetherin showed a higher level of expression on blood subsets of psoriasis compared to HC at baseline on Monocytes, T cells, NK cells and neutrophils. All data was compared to age-matched samples from healthy controls (HC). Skin biopsies were digested and RNA extracted, qPCR of common ISGs genes were analysed in lesional and peri-lesional at corresponding time points.

Conclusions: This is the first study to report a detectable hs-cTnT level in up to 30% in patients with well controlled PsA, asymptomatic for CVD, warranting a special attention to monitoring CVD risk factors and manifestations in this group. Traditional CVD risk factors but not measures of disease activity were associated with detectable hs-cTnT. The latter may be explained by a potential positive impact of anti-rheumatic therapies on the cardiovascular profile. Further prospective studies addressing the predictive role of hs-cTnT for CVD events in PsA are needed.

REFERENCES:

Disclosure of Interest: None declared

Conclusions: Psoriasis which is genetically and mechanistically linked to IFN-I signature shows responses to Ustekinumab therapy that correlate with improvement in IFN-I signatures in blood and tissues. Given that whole blood ISG signatures were complex and weakly correlating with disease activity. We provide a convenient, validated method to analyse IFN pathway in routine clinical practice using tethrin which could be a future research tool for the cell-specific IFN-I response. These studies support the idea that p40 blockers in psoriasis is associated with IFN-I pathway modulation and relevant for exploring how p40 blockers may exert potential benefit in SLE.


FRIDAY, 15 JUNE 2018

Rehabilitation

FRIO682

EXERCISE MAY DECREASE SYNCOPE SECONDARY TO POSTURAL CHANGE IN FEMALES WITH RHEUMATOID ARTHRITIS: PILOT STUDY

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Background: The autonomic nervous system (ANS) regulates the heart rate via sympathetic and parasympathetic influences. Literature has shown that rheumatoid arthritis (RA) patients suffer from autonomic dysfunction. This may consequently lead to syncope with possible falls after posture change i.e. rising from supine to the standing position. Previous research has shown general improvement in IFN-I signatures in blood and tissues. Given that whole blood ISG signatures were complex and weakly correlating with disease activity. We provide a convenient, validated method to analyse IFN pathway in routine clinical practice using tethrin which could be a future research tool for the cell-specific IFN-I response. These studies support the idea that p40 blockers in psoriasis is associated with IFN-I pathway modulation and relevant for exploring how p40 blockers may exert potential benefit in SLE.

Conclusions: Our study showed that comorbidities continue to accumulate after the initial diagnosis. The comorbidity tends to occur during diagnostic period in patients with rheumatoid arthritis. Different comorbidity indexes are all good at capturing comorbidity burden. Clinicians should screen different comorbidities, determine primary prevention and control disease activity to improve the functional status, quality of life and mortality of rheumatoid arthritis.


FRIO681

FOUR COMORBIDITY INDEXES AMONG PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Previous studies have reported an increased risk of multiple comorbidities in people with RA therefore it is necessary to systematically quantify the comorbidity burden of these patients.[1] The comorbidity index is a tool developed under this concept and has multiple clinical and research uses.

Objectives: We compared four comorbidity indexes in patients with rheumatoid arthritis in Taiwan (Charlson Comorbidity Index (CCI), Elixhauser Comorbidity Index (ECI), Mutimorbidity index (MMI), Rheumatic Disease Comorbidity Index (RDCI)).

Methods: All patients with rheumatoid arthritis diagnosed during 1998–2008 in Taiwan were identified using the Taiwan National Health Insurance Database and followed up to 31 Dec 2013. Score accumulation between periods during diagnosis (4 months before and after initial diagnosis) and before/after the diagnostic period was compared. Poisson regression was used to calculate incidence rate ratio.

Results: Among 24767 patients with rheumatoid arthritis, median age at diagnosis is 51 years old and female is 79.2%. The mean score at diagnosis is 0.8 in CCI, 2.8 in ECI, 0.7 in MMI and 1.3 in RDCI. The annual percentage changes are 2.44 in ECI, 0.73 in MMI, 2.87 in CCI, 0.80 in RDCI. The incidence rate ratios (IRR) of any increase in comorbidity score during versus before diagnosis period are higher than after versus before diagnostic period. (IRR 1.8 in CCI, 2.87 in ECI, 1.33 in MMI, 2.77 in RDCI).

Table 1 Incidence rates (IR) per 1000 patient months and incidence rate ratios.

<table>
<thead>
<tr>
<th>Comorbidity Indexes</th>
<th>Before diagnosis</th>
<th>During diagnosis</th>
<th>After diagnosis</th>
<th>IRR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of events</td>
<td>Crude</td>
<td>Crude</td>
<td>Crude</td>
<td>Crude</td>
</tr>
<tr>
<td>CCI</td>
<td>1,500</td>
<td>1,500</td>
<td>1,500</td>
<td>1,31</td>
</tr>
<tr>
<td>ECI</td>
<td>4,099</td>
<td>0.023</td>
<td>5,153</td>
<td>1.84</td>
</tr>
<tr>
<td>MMI</td>
<td>2,249</td>
<td>0.013</td>
<td>2,268</td>
<td>1.34</td>
</tr>
<tr>
<td>RDCI</td>
<td>3,486</td>
<td>0.030</td>
<td>3,703</td>
<td>1.37</td>
</tr>
</tbody>
</table>

Figure 1 Mean scores of comorbidity indexes from diagnosis year by Rheumatoid arthritis

Conclusions: Our study showed that comorbidities continue to accumulate after the initial diagnosis. The comorbidity tends to occur during diagnostic period in patients with rheumatoid arthritis. Different comorbidity indexes are all good at capturing comorbidity burden. Clinicians should screen different comorbidities, determine primary prevention and control disease activity to improve the functional status, quality of life and mortality of rheumatoid arthritis.
