Table 1. Baseline characteristics

<table>
<thead>
<tr>
<th></th>
<th>Excess disability</th>
<th>No excess disability</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>200</td>
<td>338</td>
</tr>
<tr>
<td>Age, years</td>
<td>50.4 (10.7)</td>
<td>47.0 (12.8)</td>
</tr>
<tr>
<td>Women, N(%)</td>
<td>174 (87.0%)</td>
<td>252 (74.6%)</td>
</tr>
<tr>
<td>Fatigue VAS</td>
<td>59.3 (27.2)</td>
<td>46.5 (26.5)</td>
</tr>
<tr>
<td>AIMS depression</td>
<td>4.47 (2.24)</td>
<td>3.47 (1.97)</td>
</tr>
<tr>
<td>AIMS anxiety</td>
<td>5.61 (2.25)</td>
<td>4.71 (2.27)</td>
</tr>
<tr>
<td>Health Assessment Questionnaire</td>
<td>1.39 (0.64)</td>
<td>0.93 (0.61)</td>
</tr>
<tr>
<td>DAS28-2C</td>
<td>4.04 (1.28)</td>
<td>3.98 (1.34)</td>
</tr>
</tbody>
</table>

AIMS = Arthritis Impact Measurement Scales, DAS28-2C = two-component Disease Activity Score, SD = standard deviation, VAS = visual analogue scale

Conclusion: Disability resulting from RA is a complex phenomenon, arising from more than just joint inflammation. This analysis indicates that lack of social support, financial instability and lower physical fitness at symptom onset may explain the excess disability associated with RA. As only a small portion of the effect is mediated by the PROMs, social and health inequalities may need to be targeted directly by interventions.

REFERENCES:

Conclusion: Contemporary UA has no excess mortality, in contrast to RA. So, besides milder disease at presentation within contemporary UA, also the long-term outcome mortality is more favorable and comparable to the general population. This supports the notion that contemporary UA-patients have intrinsically different characteristics than RA-patients, rather than representing an early stage of RA. Future studies are warranted to determine whether contemporary UA should be treated as RA; our results suggest that this population may deserve separate guidelines.

REFERENCES:

Disclosure of Interests: None declared.

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DIFFERENT BIOACTIVE LIPID PROFILES PREDICT RESPONSE TO TNF OR IL6 INHIBITORS IN RHEUMATOID ARTHRITIS: RESULT OF THE COREVITAS CERTAIN COMPARATIVE EFFECTIVENESS STUDY

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Background: Circulating bioactive lipids can provide information about the pathogenesis of specific diseases and potentially help predict therapeutic response. Choosing the right biological therapy earlier in the course of rheumatoid arthritis (RA) could help reach the goal of remission.

Objectives: We hypothesized that circulating bioactive lipids at baseline would identify specific metabolic profiles that predict patient response to therapy and define elements of metabolic pathobiology in arthritis.

Methods: Bioactive lipids were measured in plasma from two cohorts of RA patients from the CoreVitas (formerly known as Corrona) CERTAIN registry (1) at baseline prior to treatment with TNF inhibitors (all biologic naïve, N=102) or anti-IL-6 (all previously exposed to biologics, N=114). Response to treatment was categorized by minimal clinically important difference (MCID) in Clinical Disease Activity Index (CDAI) (2) at 6 months after treatment initiation. Patients had to have a 6 month follow up visit and plasma available at both the baseline and the 6 months visit.

Results: 102 patients (average age 54, standard deviation [SD] 12.6, 82% female [83], average BMI 29.7, SD 6.7, average CDAI 27.1, SD 13.7) starting anti-TNF therapy and 114 patients (average age 57, SD 13, 90% female [102], average BMI 30.5, SD 7.4, average CDAI 28.7, SD 13.8) starting tocilizumab were analyzed. Twenty-five bioactive metabolites discriminated between RA patients classified as anti-TNF responders (R, n = 74) and non-responders (NR, n = 28). Among these, the anti-inflammatory oxylipin maresin 2 was higher in R while the pro-inflammatory oxylipins 15d PGJ2 and 5,6-diHETE were higher in NR. Twenty different metabolites discriminated anti-IL6 R (n=73) and NR (n=41) as shown in Figure 1. The anti-inflammatory oxylipin 14-15EET was higher in R while the pro-inflammatory oxylipins 16-HETE and SS-HpETE were higher in NR.

Conclusion: Circulating bioactive lipid analysis using LC/MS provided a rapid analysis of a wide range of metabolites and can be used to describe metabolic signatures that predict response to therapies. These results lay the groundwork for more deliberate investigations novel metabolic-based interventions to predict response to therapy and reduce arthritis morbidity.

REFERENCES:

Disclosure of Interests: Mona Alotaibi: None declared, Roxana Coras: None declared, Dimitrios A Pappas: Speaker bureau: Pfizer, Novartis, Paid instructor for: Novartis, Consultant of: Roche, Sanofi, Joel M Kremer: Speaker bureau: Pfizer, Consultant of: BMS, Geoffrey Thiéle: None declared, Ted Mikuls Consultant of: Pfizer, Gilead, BMS, Sanofi, Mohit Jain Employee of: Sapient Bio, Monica Guma Grant/research support from: Pfizer, Novartis.


TAILORING ORAL THERAPY IN RHEUMATOID ARTHRITIS: THE TUTOR APP

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Background: Medication non-adherence has a significant impact on the health and well-being of individuals with chronic diseases. Indeed, with respect to important risk factors of Rheumatoid Arthritis (RA), such as cardiovascular risk factors, it is known that up to 50% of patients will stop taking medication for these conditions during the first year of prescription [1].

Objectives: To support the management of RA patients treated with Tofacitinib, we designed the TuTOR (Tailoring Tofacitinib Oral therapy in Rheumatoid arthritis) Mobile App.

Methods: A prospective-Controlled study evaluated the impact of TuTOR App on medication adherence in 20 RA patients, that began treatment with Tofacitinib jointly with the App. We used a crossover design alternating Paper-Diary and TuTOR App, with monthly clinical assessments.

Results: Seventeen patients with RA (mean age at inclusion 59.1±13y; 88% females) the study. A statistically significant decrease of DAS28 was observed since the first month of therapy with Tofacitinib (mean DAS28 at baseline 3.9±1 vs. 1 month 3.1±1, p=0.0016). Similarly, Numerical Rating Scale(NRS) of perceived activity of disease (5.8±2.1 vs 3.7±2.5, p=0.02), and subjective fatigue (6.1±2.3 vs 4.3±2.6, p=0.01) progressively decreased. No differences were reported in DAS28 and in all the NRS between the use of the TuTOR App and the Paper-Diary. A significant decrease was observed also in HAQ during the follow-up (baseline 1.38±1.11 vs six months 0.83±0.9; p=0.01). Most of the patients (82%) when filling out the self-reporting questionnaires preferred the TuTOR App in helping them to remember to take the pills. Further 82% of patients used the TuTOR App regularly (vs.53% Paper-Diary) and 76% of patients would use it in the future (vs.53% Paper-Diary). Three patients suspended the therapy with Tofacitinib due to gastrointestinal intolerance.

Conclusion: Both digital- and paper-devices can help maximize the adherence to therapy, leading to an improvement in disease’s activity, highlighting the need of supports for medication adherence.

REFERENCES:

Figure 1. Volcano plots visualizing baseline metabolites associated with responders vs. non-responders in a) anti-TNF and b) anti-IL-6 therapy groups. Results are derived from multivariate logistic regression analysis of baseline metabolites and response to therapy categorized by MCID. Data plotted as the metabolite against its statistical significance, respectively reported as odds ratio (OR) and -log10(pvalue).

Figure 2. Volcano plots visualizing baseline metabolites associated with responders vs. non-responders in a) anti-TNF and b) anti-IL-6 therapy groups. Results are derived from multivariate logistic regression analysis of baseline metabolites and response to therapy categorized by MCID. Data plotted as the metabolite against its statistical significance, respectively reported as odds ratio (OR) and -log10(pvalue).