Conclusions: In conclusion, we found that autoantibody status was not associated with early remission in newly diagnosed RA-patients receiving methotrexate in real-world clinical practice. These results do not support the hypothesis that treatment should be tailored to ‘autoantibody status’ when it comes to initiating methotrexate therapy as first-line anti-rheumatic treatment. Rather, our results indicate that that methotrexate is effective as primary anchor drug regardless of autoantibody status.

Disclosure of Interest: None declared


FRIO644

THE USE OF MRI-DETECTED SYNOVITIS TO DETERMINE THE NUMBER OF INVOLVED JOINTS FOR THE 2010 ACR/EULAR CLASSIFICATION CRITERIA FOR RHEUMATOID ARTHRITIS – IS IT OF ADDITIONAL BENEFIT?

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Background: The 2010 ACR/EULAR classification criteria have been developed, as early classification of Rheumatoid Arthritis (RA) is important. The 2010-criteria states that imaging can be used to determine the number of joints with synovitis. This seems reasonable as previous studies on Magnetic Resonance Imaging (MRI) in early arthritis patients have shown that synovitis is present in a substantial number of joints that were neither swollen nor tender at clinical examination. Although the development of the 2010-criteria was primarily data-driven, the suggestion to also use advanced imaging modalities to detect synovitis was based on expert opinion. Scientific data supporting the use of MRI is lacking.

Objectives: To assess the value of MRI-detected synovitis to determine the number of involved joints on the performance of the 2010-ACR/EULAR classification criteria for RA.

Methods: 277 consecutive patients with a clinical diagnosis of RA or undifferentiated arthritis (UA) were studied. They underwent contrast enhanced 1.5T MRI of MCP-, wrist- and MTP-joints at baseline. Two outcomes were studied after 1 year follow-up: disease modifying anti-rheumatic drugs (DMARD)-initiation and fulfilling the 1987-criteria. Test characteristics were calculated when the number of involved joints was determined with and without MRI-detected synovitis.

Results: At baseline, 143 of 277 patients did not fulfil the 2010-criteria when the number of involved joints was determined by clinical evaluation of swelling and tenderness. When MRI-detected synovitis was also considered 69 patients had increased joint counts. Of these, 36 patients received more points for the item ‘number of involved joints’ and 14 reached ≥6 points and now fulfilled the 2010-criteria for RA. Thus, 10% of patients that were formally classified as UA were not treated with DMARDs and developed alternative clinical diagnoses during the first year.

Conclusions: To our knowledge, this study is the first providing evidence on the value of MRI-detected synovitis in addition to tender and swollen joints for the classification of RA. We did not find an increased accuracy of the 2010 criteria when incorporating MRI-detected synovitis. Further research on this subject in other longitudinal cohorts is needed, but at present there is no scientific proof that MRI-detected synovitis is of additional benefit for classifying RA.

Disclosure of Interest: None declared


FRIO645

ANTI-DRUG ANTIBODIES TO CERTOLIZUMAB PEGOL ARE ASSOCIATED WITH LOW DRUG LEVELS AND REDUCED CLINICAL RESPONSE AT 3 MONTHS IN PATIENTS WITH INFLAMMATORY JOINT DISEASES. DATA FROM THE NOR-DMARD STUDY.

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Background: Anti-drug antibodies (ADA) to biological drugs predispose patients to low drug levels and lack of treatment response. For certolizumab pegol (CP) knowledge about the frequency and clinical relevance of ADA is limited in patients with inflammatory joint diseases (UD).

Objectives: To assess the frequency and clinical relevance of early ADA development in patients with inflammatory joint diseases treated with CP.

Methods: Patients from the NOR-DMARD study (n=310) with a clinical diagnosis of rheumatoid arthritis (RA, n=91), psoriatic arthritis (PsA, n=61), axial spondyloarthritis (axSpA, n=116) and other UD (42) starting treatment with CP, who had available biobank sample at 3 months follow-up, were included. Serum samples are non-tough samples collected at 3 months. Drug concentrations were analysed using an in-house immunofluorometric assay automated on the AutoDELFI immunoassay platform. ADA was detected by a principal assay measuring neutralising ADA and two confirmational tests (antigen-bridging test and a 3-step immunofluorometric assay). Patients with RA, PsA and axSpA were included in response analyses. Treatment response was defined by EULAR good/moderate response in RA, DAS28 improvement ≥0.6 in PsA, and ASDAS clinically important improvement (CII) in axSpA.

Results: After 3 months of treatment, 19 of 310 (6.1%) patients were ADA positive (5 RA, 4 PsA, 6 axSpA and 4 other UD). ADA positive patients had significantly lower CP levels than ADA negative patients, median 1.0 (IQR 0.2–6.8) vs 34.4 (IQR 21.2–44.7) mg/L (P<0.001). Response data were available for 245 patients. Of these, only 1/11 (9%) ADA-positive patients was classified as a responder, while 10/11 (91%) were non-responders. Among ADA-negative patients with response data, 129/234 (55%) were responders, while 105/234 (45%) were non-responders.

Conclusions: ADA against CP were detected in 6.1% of patients after 3 months of treatment and were associated with low drug levels and reduced treatment response. These results suggest that drug levels and ADA may be important for monitoring efficacy of treatment with TNF inhibitors, but the clinical significance needs to be examined in randomised clinical strategy trials.

Disclosure of Interest: J. E. Gehni Consultant for: Roche, G. Golf Consultant for: Abbvie, Biogen, Boehringer Ingelheim, Orion Pharma, Eli Lilly, Novartis, Pfizer, MSD, Roche, UCB, D. Warren: None declared, S. Syversen Consultant for: Roche, J. Sexton: None declared, E. Strand Consultant for: Pfizer, T. Kvien Consultant for: AbbVie, Biogen, BMS, Boehringer Ingelheim, Celgene, Celltrion, Eli Lilly, Epirus, Hospira, Merck-Serono, MSD, Mundipharma, Novartis, Oktal, Onicon Pharma, Hospira/Pfizer, Roche, Sandoz, UCB, N. Boldstad Consultant for: Pfizer, Orion Pharma, Napp pharmaceuticals, Takeda, Roche, E. Lie: None declared

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FRIO646

SYNOVIAL TISSUE HISTOPATHOLOGY FINDINGS IN EARLY RA. IS IT USEFUL? ANALYSIS OF THE BELGIUM CAP48 COHORT.

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Background: The development of ultrasound-guided synovial biopsy will enable synovial tissue collection from small joints and will facilitate histopathological studies, thus improving the understanding of early rheumatoid arthritis (ERA). The CAP48 cohort is an original multicentre prospective observational study of early RA patients with high disease activity, who are considered as non-responders to methotrexate therapy as first-line anti-rheumatic treatment.

Objectives: The aim of this study is to evaluate the potential of synovial tissue histopathology in early RA patients. This study is retrospective and the histopathological findings will be compared with clinical and biological data.

Methods: A total of 100 patients with high disease activity were included in the study. The histopathological evaluation of synovial biopsy was performed by a single expert pathologist. The evaluation of the synovial biopsy samples consisted of the analysis of the synovial tissue for synovitis, synovial pannus and fibrosis.

Results: The histopathological study of the synovial biopsy samples revealed that synovitis was present in all samples. Synovial pannus was observed in 60% of the samples and fibrosis in 40% of the samples. The histopathological findings were associated with clinical and biological data, such as pain, synovitis, joint inflammation and serum inflammatory markers.

Conclusions: Synovial tissue histopathology findings in early RA are potentially useful for clinical and biological data analysis. Further studies are needed to determine the clinical relevance of synovial tissue histopathology in early RA patients.
Rheumatoid Arthritis (RA) patients up to 50 years old supported by a charity program of the Belgian French speaking radio-television (RTBF).

Objectives: The aim of this study is to estimate the MCID for Fibromyalgia Impact Questionnaire Revised using anchor-based methodology with average pain score on Brief Pain Inventory as the anchor.

Methods: We have used data from our prospectively followed cohort of fibromyalgia patients. They were treated as per protocol with duloxetine in escalating doses. Data from this cohort was used to estimate the MCID for the FIQR using anchor-based methodology. The anchor used was the average pain score on Brief Pain Inventory (BPI). The MCID for BPI average pain score was calculated by Mease et al to be 30%. Thus, all patients in our cohort having an improvement of greater than 30% were classified as responders. All other patients were non-responders. Within these two groups, the means and standard deviations of the FIQR scores at baseline and at the end of treatment were obtained. The MCID was calculated as the difference in the unadjusted mean change in the FIQR scores between the “non-responder” group and the group with “responder group”. It was also expressed as a percentage reduction from the mean baseline FIQR.

Results: Table 1 shows the mean and standard deviation of FIQR scores at baseline, endpoint and the mean change along with the calculated MCID.

Table 1

<table>
<thead>
<tr>
<th>Anchor status</th>
<th>No. of patients</th>
<th>Baseline Mean ± SD</th>
<th>Endpoint mean ± SD</th>
<th>Mean change ± SEM</th>
<th>MCID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responder</td>
<td>58</td>
<td>58.50 ± 19.03</td>
<td>26.62 ± 14.76</td>
<td>31.88 ± 2.53</td>
<td>27.04</td>
</tr>
<tr>
<td>Non-responder</td>
<td>18</td>
<td>62.17 ± 16.97</td>
<td>57.33 ± 13.00</td>
<td>4.83 ± 3.75</td>
<td>24.70</td>
</tr>
</tbody>
</table>

Conclusions: Based on our data, we suggest that a "27.04 point" or "45.5%" improvement on the FIQR score represents the minimum clinically important difference for FIQR in fibromyalgia patients presenting with moderate to severe pain. Strengths of this work include the usage of prospectively followed patient population for analysis, protocol-based treatment with duloxetine and representation of a local population which more is applicable to our clinical practice. That MCID obtained for the FIQR score is much higher than the 14% which was the MCID obtained for the older FIQ score may suggest a population-based variation in improvement of outcome measures.

REFERENCES:

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Disclosure of Interest: None declared


FR0648

DIRECTLY COMPARING LATENT FUNCTIONAL ABILITY IN ADOLESCENTS WITH JIA USING THE CHAQ AND HAQ: AN ITEM RESPONSE THEORY ANALYSIS

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Background: Measuring and comparing functional ability in adolescents with JIA is challenging due to the use of multiple questionnaires, including the proxy-completed Childhood Health Assessment Questionnaire (C-CHAQ) and the Health Assessment Questionnaire (HAQ). Item response theory (IRT) allows items on multiple questionnaires to be linked to an underlying continuous variable. This allows scores to be corrected for characteristics of the administered items, thus making them comparable between different questionnaires. Recently, a common reporting metric for functional ability was developed in a combined dataset of 16386 patients with various inflammatory rheumatic diseases, including 1029 paediatric patients with JIA.

Objectives: i) To cross-validate the item response models using three functional ability questionnaires in adolescents with JIA. ii) To assess agreement between the rheumatic diseases, including 1029 paediatric patients with JIA.

Methods: Adolescents aged 11 to 17 with JIA were enrolled to a UK, multicentre inception cohort, the Childhood Arthritis Prospective Study (CAPS). In a sub-