FRI0084

THE IMPACT OF IL-6 AND TNF INHIBITORS ON HEMOGLOBIN LEVELS: AN ANALYSIS FROM RHUMADATA® CLINICAL DATABASE AND REGISTRY

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Background: Anemia is a common feature of RA. Prior to the appearance of biologic treatments, improvement of hemoglobin (Hb) levels was unusual and inconsistent. With better control of the inflammatory process with cytokine inhibitors, it has been shown that Hb levels can improve substantially. Recently in the development of IL-6 receptor antagonists (sarilumab (SARI) and tocilizumab (TOCI)) data have shown improvement in Hb levels related to the down-regulation of hepcidin. No direct comparison of Hb levels between TNF and IL-6 inhibition has been explored in observational data (1).

Objectives: This analysis compares the impact of TNF and IL-6 inhibitors on Hb levels over time.

Methods: Data collected since January 1, 2015 (when TOCI and SARI were available in Canada) at the Institut de Recherche en Rhumatologie de Montréal (IRRM) and the Centre de l'Ostéoporose et de Rhumatologie de Québec (CORQ) was extracted from the Rhumadata® clinical database and registry on January 7, 2019. Selected patients were those initiated on an IL-6 antagonist or a TNFi (adalimumab, certolizumab, etanercept, golimumab or infliximab) and had been treated for at least one year. Furthermore, patients were cancer free and had no diagnosis of Crohn's disease or ulcerative colitis and had creatinine (Cr) and ALT levels within the normal sex-specific range. IL-6 patients were matched (ratio 1:2) to TNFi patients based on age at treatment initiation, gender and baseline Hb. The collected data include baseline characteristics (socio-demographic variables, concomitant and past medication, comorbidities and the Charlson comorbidity index (CCI)), variables measured over time (Hb and other laboratory test results, patient and physician-reported outcomes, and disease activity measures such as CDAI and DAS28(4)-ESR. The groups were compared to identify potential confounder.

Results: A total of 145 patients initiating an IL-6 antagonist since January 1, 2015 were matched with 286 patients prescribed a TNF inhibitor during the same time-period. Most patients were women (86%), the mean age at treatment initiation was 54.1 (standard deviation=11.7) years, and 16% were smokers. Baseline patient global, pain and fatigue assessments, made on a visual analogue scale ranging from 1 to 10, were 5.4 (2.5), 6.1 (2.5) and 5.5 (3.0) in the IL6 group and 5.1 (2.7), 5.5 (3.0) and 5.0 (3.2) in the TNFi group. Baseline disease activity was assessed as moderate or high/severe in 85.5% (IL6) and 85.9% (TNFi) of patients (DAS28(4)-ESR criteria). At treatment initiation, mean Hb level was 126.6 (12.4) g/L, and Cr and ALT levels were 66.2 (11.5) µmol/L and 18.7 (6.5) U/L in the IL6 group and 67.0 (12.0) µmol/L and 19.3 (6.8) U/L in the TNFi group. At three months, Hb had increased by 5.4 (10.2) g/L in the IL6 group and by 1.8 (13.9) g/L in the TNFi group (p-value=0.024). These respective changes at 12 months were 8.7 (11.4) g/L and 5.4 (9.2) g/L (p-value=0.042).

Conclusion: This analysis confirms that IL-6 inhibition provides a numerically and statistically superior increase in Hb over TNFi.

REFERENCE:

[1] Song, et al. Arthritis Research & Therapy 2013, 15:R141

Disclosure of Interests: Denis Choquette Grant/research support from: Abbvie, Amgen, Eli Lilly, Novartis, Pfizer, Sandoz, Consultant for: Abbvie, Amgen, Eli Lilly, Novartis, Pfizer, Sandoz, Speakers bureau: Abbvie, Amgen, Eli Lilly, Novartis, Pfizer, Sandoz, Louis Bessette Grant/research support from: Abbvie, Amgen, Bristol-Myers Squibb, Celgene, Eli Lilly, Janssen, Novartis, Pfizer Inc, Roche, Sanofi, UCB, Consultant for: Abbvie, Celgene, Eli Lilly, Novartis, Pfizer Inc, Loïc Choquette Sauvageau: None declared, Isabelle Ferdinand Consultant for: Abbvie, Amgen, Novartis, Pfizer, Speakers bureau: Amgen, Pfizer, Paul Haraoui Grant/research support from: Abbvie, Amgen, Pfizer, UCB, Consultant for: Abbvie, Amgen, Lilly, Pfizer, Sandoz, UCB, Speakers bureau: Pfizer, Frédéric Massicotte Consultant for: Abbvie, Pfizer, Janssen, Eli Lilly, Speakers bureau: Janssen, Jean-Pierre Pelletier Shareholder of: Shareholder in ArthroLab Inc., Grant/research support from: Study funded by TRB Chemedica SA, Consultant for: TRB Chemedica SA, Jean-Pierre Raynaud Consultant for: ArthroLab Inc., Marie-Anaïs Rémillard Consultant for: Abbvie, Amgen, Eli Lilly, Novartis, Pfizer, Sandoz, Paid instructor for: Abbvie, Amgen, Eli Lilly, Novartis, Pfizer, Sandoz, Speakers bureau: Abbvie,

Amgen, Eli Lilly, Novartis, Pfizer, Sandoz, Diane Sauvageau: None declared, Édith Villeneuve Consultant for: Abbvie, UCB, Celgene, Roche, Pfizer, Amgen, BMS, Sanofi-Genzyme, Paid instructor for: Abbvie, Speakers bureau: Abbvie, Pfizer, BMS, Roche, Louis Coupal: None declared
DOI: 10.1136/annrheumdis-2019-eular.4161

FRI0085

TAPERING OF BIOLOGICAL ANTIRHEUMATIC DRUGS IN RHEUMATOID ARTHRITIS PATIENTS IS ACHIEVABLE AND COST EFFECTIVE IN DAILY CLINICAL PRACTICE: DATA FROM THE BRUSSELS UCL RA COHORT

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Background: Several studies have demonstrated that Rheumatoid Arthritis (RA) patients achieving low disease activity or remission are able to taper biological disease-modifying antirheumatic drugs (bDMARDs).

Objectives: The aim of this study is to evaluate the proportion of patients in whom the bDMARD can be tapered in daily practice and to analyse the characteristics of these patients. Another objective is to determine which bDMARDs are more adapted to dose reduction and the cost saving.

Methods: Inclusion criteria were RA patients from our Brussels UCL cohort treated with a bDMARD for at least one year. A dose reduction was proposed by the senior physician when sustained low disease activity or remission was achieved. Patient characteristics and baseline features before the introduction of the current bDMARD were collected as well as flares if happened. We also calculated, for each bDMARD, the proportion of patients who received a decreased dose and the annual cost.

Results: Data from 332 eligible RA patients were collected, 140 patients (42.1%) had a tapered regimen and 192 received a full dose of bDMARD. In the decreased dose group, age at diagnosis (43.1 vs 38.7 years, p=0.004), HAQ (1.3 vs 1.5, p=0.048), RF (83.3 vs 72.9%, p=0.026) and disease duration at the bDMARDs introduction (9.7 vs 12.1 years, p=0.034) were statistically different. As expected, the current DAS28-CRP was lower (2.26 vs 2.64, p=0.001) in the decreased dose group and interestingly, more patients receiving a decreased dose were treated with a combination of methotrexate when the bDMARD was introduced (86.7% vs 73.8%, p=0.005). No difference between groups was observed for gender, ACPA, erosion, number of previous bDMARDs, time to first conventional synthetic DMARD and biological DMARD, baseline DAS28-CRP and use of glucocorticoids. In our cohort, anti-TNF agents were the most commonly prescribed medications (anti-TNF 68%, tocilizumab 15%, rituximab 10%, abatacept 7%). Only 15 patients experienced a flare during the follow-up. Adalimumab, etanercept and rituximab were the most frequent decreased bDMARD and were associated with the most important reduction of annual cost.

Figure 1. Proportion of patients with decreased dose for each bDMARD

ABA : abatacept, ADA : adalimumab, CZP : certolizumab, ETN : étanercept, GOL : golimumab, IFX : infliximab, RTX : rituximab, TOC : tocilizumab

Conclusion: In daily practice, tapering of bDMARDs in RA patients with low disease activity or remission is an achievable goal in a large proportion of patients, thereby reducing annual drug cost. The combination with methotrexate could be a positive predictive factor for the success of bDMARD tapering but further prospective research in daily practice are needed to confirm this result.

Disclosure of Interests: Stephanie Dierckx: None declared, Bernard Lauwerys: None declared, Tatiana Sokolova: None declared, Laurent Meric de Bellefon: None declared, Maria Stoenoiu Grant/research support from: Abbvie, Roche, Wyeth, Adrien Nzeusseu: None declared, Frederic Houssiau: None declared, Aleksandra Avramovska: None declared, Patrick Durez Speakers bureau: Bristol-Myers Squibb, Eli Lilly, Sanofi, Celltrion
DOI: 10.1136/annrheumdis-2019-eular.5634