Angela Tincani Consultant for: UCB, Pfizer, Abbvie, BMS, Sanofi, Roche, GSK, AlphaSigma, Lilly, Janssen, Cellgene, Novartis

DOI: 10.1136/annrheumdis-2019-eular.7614

SAT0130

ANTI-CITRULLINATED PEPTIDE ANTI-BODIES TITERS DECREASE AFTER RITUXIMAB BUT NOT AFTER ABATACEPT OR TNF BLOCKERS TREATMENT: A REAL-LIFE ANALYSIS

Stéphane Hilliquin¹, Loriane Gutermann², Claire Goulvestre³, Jerome Avouac¹, Maxime Dougados¹, Anna Moltó¹. ¹Hopital Cochin, Rheumatology, Paris, France; ²Hopital Cochin, Pharmacy, Paris, France; ³Hopital Cochin, Immunologic laboratory, Paris, France

Background: There is an increasing body of evidence suggesting a direct pathophysiological role of ACPA in Rheumatoid Arthritis (RA). Therefore, on the top of clinical, biological and imaging remission, one target could be immunological remission, defined as the normalization of the ACPA titers after therapy. In this sense, data related to the capacity of different biologics to normalize ACPA are contradictory.

Objectives: To evaluate the changes in ACPA titers before and after treatment with different biologics.

Methods: RA patients treated with biologics were identified via the hospital's pharmacy and/or the Electronic Medical Record of the patients; thereafter, for each patient, ACPA titers before/after treatment were retrieved from the department of biology. To be included, patients had to be diagnosed with RA, to have received a biologic (either abatacept IV or SC, TNF-inhibitors (TNFi) (Infliximab iv and Etanercept SC), or Rituximab IV) and to have at least two dosages of ACPA (at least one before and one after biologic treatment). ACPA titers were compared before and after treatment in each of the treatment groups. A mixed model analysis including an interaction between the drug and time was also performed.

Results: Among the 328 selected RA patients 92 patients (female: 84%, mean age: 62 years) had enough biological data to be included for the analysis: 36 patients had received rituximab, 21 abatacept, 35 TNFi. Mean (Standard deviation) ACPA levels in the whole group before treatment was 924.8 (1164.6) UI/L. ACPA titers (summarized in figure 1) decreased significantly after Rituximab (from 1287 (1322) to 301(387) UI/L; $p < 0.005$) but not after Abatacept (from 857(1166) to 1352(1241) UI/L) or TNF blockers (from 593(881) to 1116(1398) UI/L). Modelisation of ACPA titers over follow-up (mixed models) revealed a significant interaction between drug and time, suggesting a drug effect of such variation (Figure)

Figure 1. Changes in the ACPA titers after biologics treatment in RA where T0 = before biologic; T1 to T4 = timepoints after biologic

Conclusion: In this real-life study, ACPA titers decrease slightly only after Rituximab therapy. These data suggest that there is potentially a huge unmet need in RA if the target is to achieve an immunological remission. **Disclosure of Interests:** Stéphane Hilliquin: None declared, Loriane Gutermann: None declared, Claire Goulvestre: None declared, Jerome Avouac: None declared, maxime dougados Grant/research support from: Eli Lilly and Company, Pfizer, AbbVie, and UCB Pharma, Consultant for: Eli Lilly and Company, Pfizer, AbbVie, and UCB Pharma, Anna Moltó: None declared

DOI: 10.1136/annrheumdis-2019-eular.2499

SAT0131

SAFETY AND EFFECTIVENESS OF DISEASE-MODIFYING ANTI-RHEUMATIC DRUGS (bDMARDs) IN OLDER ADULTS WITH RHEUMATOID ARTHRITIS: A RETROSPECTIVE COHORT STUDY

Ripa Akter¹, Walter P. Maksymowych², Liam Martin³, David Hogan⁴. ¹University of Calgary, Department of Medicine, Division of Geriatric Medicine, Calgary, Canada; ²University of Alberta, Division of Rheumatology, Department of Medicine, Calgary, Canada; ³University of Calgary, Division of Rheumatology, Department of Medicine, Calgary, Canada; ⁴University of Calgary, Division of Geriatric Medicine, Department of Medicine, 3330-Hospital Dr. NW, Canada

Background: Rheumatoid arthritis is common among older adults and biological disease-modifying antirheumatic drugs (bDMARDs) are effective in treating this population. However, older patients reportedly experience more adverse events (AEs) with effectiveness being either equivalent or worse than younger patients.

Objectives: Our primary objective was to compare the AEs associated with the use of bDMARDs and their relative effectiveness in three age groups: Group 1 (75+), Group 2 (65-74 years) and Group 3 (55-64 years) patients. We explored if sex, disease activity, baseline functional impairment, and the type of bDMARDs used differed across the three age groups as a secondary objective.

Methods: A retrospective cohort study of adults 55+ with RA seen between Jan 1, 2007 and July 31, 2009 was performed utilizing the RAPPORT (Rheumatoid Arthritis Pharmacovigilance Program and Outcomes Research in Therapeutics) database housed in Edmonton, Alberta, Canada. Baseline characteristics (age, sex, DAS28 score, HAQ score, types of bDMARDs used), drug effectiveness (based on DAS28 score) and associated AEs were compared across the three age groups. Descriptive statistics (Mean, SD, percentages) were used. An intention to treat analysis with chi-square testing for categorical variables and t testing for continuous ones were used to test for the significance of differences found.

Results: A total of 333 patients met our entry criteria (69.4% female, 30.6% male) with 52, 125 and 156 from groups 1, 2 and 3 respectively. Group 1 patients had a significantly higher mean HAQ score (2.16) compared to the younger groups ($P < 0.05$), and a mean DAS28 (6.52) score significantly higher than the 55-64 group ($P < 0.05$). Group 1 patients were also more likely to experience AEs ($p < 0.05$), which were more likely to be infectious ($p < 0.05$), life threatening/severe ($p < 0.05$), cause discontinuation of treatment ($p < 0.05$) and multiple ($p < 0.05$) compared to the two younger groups. We also interestingly found the remission rate to be significantly higher in Group 1 patients compared to Group 2 ($p < 0.05$). Etanercept was the most commonly used drug among all age groups. Rituximab and abatacept were much less frequently used. Rate of AEs and therapy effectiveness did not differ significantly by sex across the three age groups.

Conclusion: Older adults aged 75+ treated with bDMARDs for RA are at a significantly higher risk of AEs, which should be included in the treatment discussion. The higher remission rate in those 75+ compared to those 65-74, which has not been reported previously, warrants further study.

REFERENCES

- [1] Dalal D, Duran J, Brar T, Alqadi R, Halladay C, Lakhani A, Rudolph J. Efficacy and safety of biological agents in the older rheumatoid arthritis patients compared to Young: A systematic review and meta-analysis. *Seminars in Arthritis and Rheumatism*. 2018 Jul 31. pii: S0049-0172(18) 30162-8 [Epub ahead of print].
- [2] Sugihara T, Harigai M. Targeting Low Disease Activity in Elderly-Onset Rheumatoid Arthritis: Current and Future Roles of Biological Disease-Modifying Antirheumatic Drugs. *Drugs & Aging*. 2016; 33(2): 97-107.
- [3] Filippini M, Bazzani C, Favalli E, et al. Efficacy and Safety of Anti-Tumour Necrosis Factor in Elderly Patients with Rheumatoid Arthritis: An