In contrast, the region with the highest number of cases was the southeastern region (where the states of Espírito Santo, Minas Gerais, São Paulo and Rio de Janeiro are located), with a total of 13173 hospitalizations and a monthly average of 365.9, representing 34.4% of hospitalizations in the country. Such data is in line with the Brazilian demography, since the central-west region is the second least inhabited (with 16.09 million inhabitants) and the southeastern region is the most densely inhabited (with 80.35 million inhabitants). The number of monthly hospitalizations, which remained above 1000 from the first month analyzed (December 2017) until February 2020, dropped to 990 in March of the same year and 651 in April, maintaining an average of 678.2 in next seven months.

Conclusion: It is concluded that the number of hospitalizations for rheumatoid arthritis and other inflammatory polyarthropathies in Brazil dropped significantly between March and April 2020, a period that coincides with the beginning of the COVID-19 pandemic in the country, possibly as a result both of the changes in the Brazilian medical care model (in relation to the requirements for hospitalization) and as a result of the lower demand by individuals for hospitals due to fear of contamination by the new coronavirus.

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Validation of outcome measures and biomarkers

AB0834

DEVELOPMENT OF A CONCEPTUAL FRAMEWORK FOR A PATIENT REPORTED OUTCOME MEASURE TO CAPTURE PATIENTS' PERCEPTIONS OF GLUCOCORTICOID THERAPY DURING TREATMENT FOR RHEUMATIC DISEASES

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Background: Glucocorticoids (GCs) are a key treatment for the autoimmune rheumatic diseases; however, they produce numerous physical and psychological side effects.¹ The Outcome Measures in Rheumatology (OMERACT) Glucocorticoid Working Group have identified that there are no Patient Reported Outcome Measures (PROMs) for assessing the impact of systemic GC therapy across multiple rheumatic diseases from the patient's perspective.^{2,3}

Objectives: The aim is to explore the impact of GCs on the symptoms and health-related quality of life of adults with rheumatic inflammatory diseases, to inform items for inclusion in a PROM. Key considerations will include patient perceptions of GC therapy at diagnosis and over the course of treatment, for use in future randomised controlled trials or in clinical practice.

Methods: An international steering committee comprising researchers, rheumatology clinicians, methodologists and patient partners in the UK, Australia and USA developed an initial conceptual framework informed by a review of the literature. Semi-structured interviews were conducted in each country with patients who had an autoimmune rheumatic disease and had received GC therapy. The interviews explored salient aspects of health-related quality of life associated with being treated with GCs.

Results: Interviews have been completed in three continents with patients who had a range of demographic features, rheumatological conditions and duration and dosage of GC therapy. Figure 1 shows the initial conceptual framework for developing the GC PROM (Steroid PRO).

Conclusion: This conceptual framework will act as an evolving guide in the development of a PROM for assessing patients' perspectives of systemic

Figure 1.

glucocorticoid therapy. Future work will include inductive analysis of qualitative transcripts to inform candidate questionnaire items, cognitive interviewing, linguistic translatability assessment, and an international validation survey to define the final PROM questionnaire and its measurement properties.

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AB0835

IS BASELINE VITAMIN D STATUS RELATED WITH THE RESPONSE TO BDMARDS IN SPONDYLOARTHRITIS PATIENTS?

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Background: Vitamin D is thought to have an important role in immune regulation and is being subject of research in several autoimmune diseases. Some data suggest that vitamin D deficiency is common in Spondyloarthritis (SpA) and may be associated with disease activity and structural damage.

Objectives: To evaluate if there is a relation between baseline vitamin D status and the response to biologic disease-modifying antirheumatic drugs (bDMARDs) in a SpA monocentric cohort.

Methods: Retrospective study including all the SpA patients (ASAS classification criteria) followed at our Rheumatology Department, registered in the

national database and treated with bDMARD between June 2008 and July 2020. Demographic, clinical and laboratorial data (including 25-hydroxyvitamin D [25-OHvitD]) at baseline and disease activity measures at 6 and 12 months of treatment with the first bDMARD were collected. Correlations between variables were evaluated by Spearman rank test, Mann-Whitney U test was used to the comparison analysis between groups and univariate logistic regression was used in the prediction analysis.

Results: A total of 195 SpA patients were included: 103 (52.8%) females, 47 (24.1%) smokers and 91 (46.7%) HLA-B27 positive; 139 (71.3%) had Ankylosing Spondylitis, 18 (9.2%) had Inflammatory Bowel Disease Associated SpA and 38 (19.5%) had Undifferentiated SpA. At the time of the first bDMARD, the mean age was 43.5 years (± 9.6) and the median disease duration was 12.4 years (0.7–52.7). The mean ASDAS-CPR (Ankylosing Spondylitis Disease Activity Score with C-reactive protein) was 3.9 (± 0.8) and, in addition, 61 (31.3%) patients had 25-OHvitD levels below 30 ng/mL and 12 (6.2%) had 25-OHvitD levels below 20 ng/mL. Fifty-three patients (27.2%) were taking NSAIDs (nonsteroidal anti-inflammatory drugs), 77 (39.5%) were under csDMARDs (conventional synthetic disease-modifying antirheumatic drugs). Adalimumab (56%) and golimumab (33.3%) were the most frequently initiated bDMARDs in the first line.

There were no statistically significant correlations between baseline 25-OHvitD levels and ASDAS-CRP at 6 ($r=0.031$; $p=0.714$) and 12 months ($r=0.035$; $p=0.672$) of bDMARD.

In the subgroup analysis: there were no statistically significant differences in the response to bDMARD at 6 and 12 months evaluated by ASDAS response and ASAS 20, 40 and 70 responses according to the baseline 25-OHvitD levels (25-OHvitD <20 ng/mL vs ≥ 20 ng/mL; 25-OHvitD <30 ng/mL vs ≥ 30 ng/mL); and there were no statistically significant differences in the baseline 25-OHvitD levels at baseline according to the response to bDMARD at 6 and 12 months of bDMARD (ASDAS: no response vs clinically important improvement or major improvement; ASAS 20: no response vs response).

In the line of these previous results, baseline 25-OHvitD levels did not predict the ASDAS response at 6 (OR 0.97 [0.95–1.00], 95% CI) or 12 (OR 0.98 [0.95–1.01], 95% CI) months of bDMARD.

Conclusion: Despite some data that suggest that lower levels of 25-OHvitD may be associated with higher disease activity in SpA, our results failed to demonstrate that the baseline 25-OHvitD levels can be related or predict treatment response after 6 and/or 12 months of therapy with the first bDMARD in real-life SpA patients.

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AB0836

DIAGNOSIS VALUE OF INTERLEUKIN 17 IN SPONDYLOARTHRITIS

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Background: Interleukin 17 (IL-17) is pro-inflammatory cytokine that plays a crucial role in spondyloarthritis via the Th17/IL-17 axis. (1)

Objectives: We aimed to study the diagnosis value of IL-17 serum in spondyloarthritis.

Methods: We conducted a case-control study, including 104 subjects divided into 2 groups:

-G1: 52 patients meeting the Assessment of SpondyloArthritis International Society (ASAS) criteria for spondyloarthritis (SA)

-G2: 52 healthy controls matched for age and sex.

The IL-17 level was measured using Enzyme-linked immunosorbent assay (ELISA).

We performed a ROC analysis and computed the area under the curve (AUC) at IL-17 to assess the ability of IL-17 to diagnose SA.

Statistical analysis was performed using "IBM SPSS Statistics" software version 25.

Results: Eighty per cent of the patients were men ($n=41$). The mean age was 44.96 ± 13.09 years. The mean age at the onset of the disease was 35.07 ± 12.66 years. The disease duration was 9.25 ± 8.09 years. Axial radiographic spondyloarthritis and peripheral involvement were found in 53.8% ($n=28$) and 44.2% ($n=23$) of cases, respectively. Psoriasis was noted in 46% of cases ($n=24$). The mean ASDAS-CRP was 3.21 ± 1.64 .

IL-17 level was significantly higher in patients compared to healthy controls (92.76 ± 71.85 pg/mL and 2.67 ± 9.01 pg/mL, respectively, $p<0.0001$).

As shown in Figure 1, the AUC value to distinguish between spondyloarthritis and healthy control was 0.987 ($p<0.0001$). IL-17 cut-off was 13.79 pg/mL (Sensitivity= 94.2%, specificity=98.1%).

Conclusion: According to previous studies, our study showed that serum IL-17 level is significantly higher in SA patients compared to healthy controls (2).

Figure 1. AUC at IL-17 between SA patients and healthy controls 0.987 ($p<0.0001$)

Interestingly, IL-17 was able to distinguish between SA patients and healthy controls with a cut-off of 13.79 pg/mL. This finding suggests that IL-17 may be useful for the diagnosis of SA.

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AB0837

SERUM YKL-40 LEVELS IN PATIENTS WITH EARLY RHEUMATOID ARTHRITIS: RELATION TO DISEASE ACTIVITY AND JOINT DESTRUCTION

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Background: YKL-40 (chitinase-3-like 1 protein, human cartilage glycoprotein 39) is one of the major proteins secreted locally in the arthritic joint by activated macrophages, chondrocytes, synoviocytes and neutrophils, YKL-40 an important marker for inflammation, cartilage remodelling and synovial hyperplasia is recognized as a possible auto-antigen in rheumatoid arthritis (RA).

Objectives: The aims of the study were to determine the serum level of YKL-40 in early RA and investigate his relationship with biomarkers of disease activity and joint destruction.

Methods: We studied 22 patients with early RA (ACR/EULAR 2010 classification criteria); 4 males, 18 females; median and interquartile range (25th–75th percentile) of age 55,0 (43,0–64,0) years, disease duration 7,0 (5,0–11,0) months, DAS28 4,9 (4,3–5,8); 86% IgM rheumatoid factor (IgM RF) +; 91% anti-cyclic citrullinated peptide antibody (anti-CCP) +. All patients were treated with methotrexate (MTX). Three (14 %) patients received low oral doses of steroids and intra-articular injections. The control group included 22 healthy donors (HC). Radiographs were scored according to the van der Heijde-modified Sharp score. YKL-40, matrix metalloproteinase-3 (MMP-3), anti-CCP were detected using commercially available enzyme-linked immunosorbent assays (ELISA). The serum levels of IgM RF, C-reactive protein (CRP), serum amyloid A (SAA) were measured by immunonephelometry.