cells and the CD33 +CD11b+myeloid derived suppressor cells were assessed using flow cytometry.

Results: After 20 weeks of exercise intervention there was a decrease in the frequency of Foxp3 +CD25+CD127 regulatory T cells and CD24hiCD38hi B cells but no change was observed in the active control group. The reduction in Tregs by exercise was most pronounced in the female participants. Despite lower levels of adaptive immune cell populations the disease activity did not increase.

Conclusions: Aerobic and resistance exercise in elderly patients with rheumatoid arthritis lead to a decreased number of regulatory Foxp3 +CD25+CD127 regulatory T cells and CD24hiCD38hi B cells. This decrease was not associated with an increased disease activity score or increased inflammation.

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FRI0085

A STUDY OF THE RELATIONSHIP BETWEEN SERUM VITAMIN D LEVEL AND DISEASE ACTIVITY IN RHEUMATOID ARTHRITIS PATIENTS

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Background: Vitamin D is an essential component of our body. Approximately 3% of the human genome is directly or indirectly regulated by the Vitamin D endocrine system, which supports the idea that Vitamin D insufficiency has widespread adverse consequences for human health.^[1] Till date several studies have been done regarding the relation of Vitamin D and Rheumatoid Arthritis but there are limited studies in Eastern India. Hence this study is being done to examine the relation of serum 25 hydroxy Vitamin D level and Disease Activity in Rheumatoid Arthritis patients.

Objectives:

- To examine the relationship between Serum 25 Hydroxy Vitamin D level and SDAI (Simplified Disease Activity Index) in Rheumatoid Arthritis patients.
- To examine the relationship between Serum 25 Hydroxy Vitamin D level and Tender Joint Count(TJC), Swollen Joint count(SJC) and CRP in Rheumatoid Arthritis patients.
- To evaluate the relation of serum vitamin D level with various socio demographic factors like Gender, Diet, Occupation, Season, Height, Weight, BMI in Rheumatoid Arthritis Patients.

Methods: Ninety six RA patients attending The Rheumatology clinic of Out Patient Department of An Urban Tertiary care hospital (Latitude of KOLKATA is 22°32'N) from October 2013 to September 2014, fulfilling the ACR –EULAR 2010 criteria for classification of RA, were included in the study. 25(OH) vitamin D levels were measured. Disease activity of RA was assessed by SDAI score.

Results: More than Ninety Percent of the RA patients were found to have either Vitamin D deficiency or insufficiency. The mean serum vitamin D level of these RA patients was 20.02 (±8.92) ng/ml. The RA patients with High Disease Activity (SDAI between 26.1 and 86) had significantly low ($p < 0.0001$) mean serum vitamin D level [11.11 (±6.08) ng/ml] than those with Moderate (SDAI between 11.1 and 26) or Low Disease Activity (SDAI between 3.4 and 11.0) whose serum vitamin D level was 21.15 (±7.47) ng/ml and 25.58 (±7.30) ng/ml respectively. There is a significant negative correlation between the Serum Vitamin D level and SDAI score ($r = -0.669$, $p < 0.0001$) in the whole group of the study population. However On analysing the data separately in RA patients with Vitamin D deficiency, insufficiency and sufficiency, this significant relation is separately evident only in the RA patients with Vitamin D deficiency (serum vitamin D level < 20 ng/ml) but not in those who were in the insufficient or sufficient groups. There is an independent negative impact of Simplified Disease Activity Index (SDAI) on Serum Vitamin D level (Adjusted $R^2 = 0.464$, $p < 0.0001$).

Conclusions: RA patients having high disease activity in terms of SDAI Score had significantly low vitamin D level compared to patients of RA having low or moderate disease activity. Lower levels of serum vitamin D was associated with increased disease activity in RA patients. On subgroup analysis, there is significant negative correlation separately evident only in the RA patients with Vitamin D deficiency (serum vitamin D level < 20 ng/ml) but not in those who were in the insufficient or sufficient groups.

REFERENCE:

- [1] Bouillon R, Carmeliet G, Verlinden L, et al. Vitamin D and human health: lessons from vitamin D receptor null mice. *Endocr Rev* 2008;29:726–776.

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FRI0086

IS THE DISCORDANCE BETWEEN THE DOCTOR AND THE PATIENT A DETERMINANT OF ADHERENCE?

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Background: Adherence is a critical factor in the therapeutic response in rheumatoid arthritis (RA), which may be influenced by the doctor-patient relationship. In the ARCO study, we previously reported a percentage of lack of adherence to the subcutaneous biologic of 14.3% during the first 14 months of treatment, and that the adherence was better in patients without induction and with a monthly administration schedule.¹ In this *post hoc* analysis, we explored whether doctor-patient disagreements may be related to lower adherence rates.

Objectives: To analyse the percentage of patients with discrepancies in the evaluation of the activity of the disease between doctors and patients and a possible association between the existence of disagreement and adherence to subcutaneous biological drugs.

Methods: The ARCO study was a multicenter, cross-sectional study in which patients with RA were included according to EULAR-ACR 2010 criteria, who had been prescribed a subcutaneous biological drug in the previous 12–18 months. As part of the evaluation of the disease, patients and doctors were asked to rate the disease on a visual analogue scale (VAS), with values ranging from 0 to 10; with higher values indicating worst symptoms. Disagreement was defined as a difference of ≥ 3 points between the absolute values. Adherence was assessed retrospectively by means of the Medication Possession Ratio (MPR), considering adherence those patients with MPR $> 80\%$. The association between adherence and disagreement was studied using bi and multivariate logistic regression models with covariates-adjustments.

Results: We included 360 patients (77.5% women, mean age: 55 ± 0.6 years). Disagreement was detected in 56 (15.5%). In patients with disagreement, the mean VAS score of the patient was 5.75 ± 1.8 versus 2.7 ± 2.2 in the group without disagreement ($p < 0.001$), and there were no differences in terms of the doctors VAS (group with disagreement $= 2.7 \pm 1.8$ versus 2.2 ± 2.0 in the group without disagreement, $p = 0.110$). The two groups of patients presented differences in terms of age (5 years more than average in the group with disagreement, $p = 0.010$), presence of comorbidity (14% more frequent in the group with disagreement, $p = 0.030$) and the value of the mean DAS28 (0.6 points higher in the group with disagreement, $p < 0.001$). Among the patients who presented a VAS disagreement, the percentage of non-adherence was 10.7%, and of 14.5% among those who had a VAS similar to the doctor ($p = 0.45$). The regression analysis showed no difference in the association between adherence and disagreement; by introducing into the models covariates associated with adherence (induction, frequency of administration and age) or with disagreement (age, comorbidity and DAS28).

Conclusions: We observed a disagreement between patients and doctor VAS scores in 15.5% of cases, with higher values coming from patients. We did not observed an association between this disagreement and adherence to subcutaneous biological drugs.

REFERENCE:

- [1] Calvo-Alén J, Monteagudo I, Salvador G, Vazquez-Rodríguez TR, Tovar-Beltrán JV, Vela P, et al. Non-adherence to subcutaneous biological medication in patients with rheumatoid arthritis: a multicentre, non-interventional study. *Clin Exp Rheumatol* 2017;35(3):423–30.

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FRI0087

REGIONAL AGE- AND SEX-SPECIFIC INTIMA-MEDIA THICKNESS CRITERIA IN YOUNG PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis (RA) is associated with early progression of cardiovascular (CV) diseases. The CV risk calculators had been verified on a specific population¹ and should be applied predominantly for them. Systematic Coronary Risk Evaluation (SCORE) was recommended by EULAR for use in RA patients with multiplying coefficient 1.5.² Nevertheless, SCORE don't consider RA-specific factors and couldn't be used in young patient. For timely prevention