AB0180 VITAMIN D SUPPLEMENTATION ON DISEASE ACTIVITY IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis(RA) is a chronic inflammatory autoimmune disease with unknown etiology that primarily affects the peripheral joints and, over time, leads to loss of mobility if untreated.1 The prevalence of RA in Myanmar was 1.3% in 2004.2 According to Rheumatology outpatient clinic records of Mandalay General Hospital, there were 402 old patients and 104 new RA patients in 2017 and 453 old patients and 102 new RA patients attending in 2018. In addition to the main effects of vitamin D (vit D) on bone and calcium metabolism, it has other roles in the body, including modulation of cell growth, neuromuscular and immune function, and reduction of inflammation .3 Due to difference in ethnic origins and geographical distribution, the results may be varied when it is done in sunshine rich area such as Myanmar. In the present study, vitamin D supplementation on the disease activity of RA by DAS28 was determined.

Objectives: 1.To compare DAS28 score before and 12 weeks after vitamin D loading dose supplementation in RA patients with vitamin D deficiency

2.To compare DAS28 score before and 12 weeks after vitamin D 1000 IU per day supplementation in RA patients with normal serum vitamin D level

Methods: 58 patients with RA attending to medical unit I, II, III and Rheumatology outpatient clinic of Mandalay General Hospital were recruited. Disease activity was assessed according to DAS28. Patients with DAS28 ≥ 2.6 were assessed for serum vitamin D status. Those with vitamin D level < 20 ng/ml were defined as vitamin D deficient and vitamin D_3 5, 000 IU per day for 8 weeks, then 1, 000 IU per day for 4 weeks were given orally for a total of 12 weeks duration. Patients with normal Vit D level (≥ 20 ng/ml) were provided with Vit D 1000 IU per day for 12 weeks.

Results: Before 12 weeks of Vit D supplementation, 53.45% of patients with RA (2 male and 29 female) were Vit D deficient and 46.55% of patients (1 male and 26 female) had normal serum Vit D level. The largest age group was between 46-55 years in both groups which comprised 41.38% of patients. In patients with Vit D deficiency, mean serum Vitamin D level was 10.32 ± 4.26 ng/ml and, in patients with normal Vit D level, mean serum Vitamin D level was 36.51 ± 17.76 ng/ml.

After 12 weeks of Vit D supplementation, out of 31 patients with Vit D deficiency, serum Vit D level of 23 patients became ≥ 20 ng/ml although only 3 patients were still Vit D deficient. Both groups showed improvement in clinical and biochemical parameters such as VAS, ESR, tender and swollen joint counts.

Before 12 weeks, more than 40% of patients had high or moderate disease activity in each group. After 12 weeks of Vit D supplementation, in Vit D deficient group, most patients (54.84%) had disease remission and 22.58% of patients were found to have moderate disease activity. Disease activity of 19.35% of patients became low. Only one patient had high disease activity.

After 12 weeks of Vit D supplementation, in Vit D normal group, disease activity of most patients (48.15%) became low and 33.33% had remission. 18.52% of patients with RA were found to have moderate disease activity. No patient had high disease activity.

Although there was no correlation between serum Vit D level and DAS28, DAS28 score was significantly decreased from 5.27 to 2.79 (*P* 0.0000) after 12 weeks of Vit D loading dose supplementation in RA patients with Vit D deficiency. Similarly, DAS28 score of RA patients with normal Vit D level was significantly decreased from 5.04 to 2.71 (*P* 0.0000) after 12 weeks of Vit D 1000 IU supplementation.

Conclusion: The present study revealed that Vitamin D supplementation was effective in reducing disease activity in patients with Rheumatoid arthritis. These findings may be helpful in the treatment of Rheumatoid arthritis.

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AB0181 COULD TITERS OF ACPA PREDICT THE SEVERITY OF RHEUMATOID ARTHRITIS, ANALYSIS OF DATA DURING A 3-YEARS FOLLOW-UP?

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Background: Rheumatoid Factor (RF) and/or Anti Citrullinated Protein Antibodies (ACPA). Are included in classification criteria of Rheumatoid arthritis (RA); their presence correlates with RA severity. The influence of ACPA titer on RA course and outcome in long-term follow-up is limited.

Objectives: To check the correlation between ACPA titers at the time of RA diagnosis to RA features and severity during 3 years follow-up.

Methods: We performed a retrospective study on patients treated at our institution during the years 2006-2015 with known ACPA titers at RA diagnosis, who completed at least 3 years of follow-up. Patients (pts) were divided according to ACPA titer: A - seronegative (<15 U/ml), B - weak positive (15-49 U/ml) and C - strong positive (>50 U/ml) with subdivision to C-1 - moderately high (50-99 U/ml), C-2 - high (100-299 U/ml) and C-3 - very high (>300 U/ml). Patient's data including DAS28, bone erosion on hands and/or foot X-rays, treatments with corticosteroids and DMARDs and hospitalizations due to flares. Chi-Square and Mann-Whitney method were used for statistical analysis; p<0.05 was considered statistically significant.

Results: Among 850 pts with RA, 133 (mean age 55 years, 65% female) met the inclusion criteria: group A: 55 (42%) pts, group B: 18 (13%) pts, group C: 60 (45%) pts [C1- 10 pts, C2-21 pts and C3-29 pts]. Most of the characteristics were similar between the groups (including C subgroups). There were no significant differences between the groups in terms of tender and/or swollen joints, acute phase reactants, bone erosions, need for corticosteroids or DMARDs, hospitalizations, number of DMARDs and number of biologicals. There was significant correlation between ACPA titers and positive RF (p<0.0001); it was consistent in all patients groups. Higher ACPA titers were associated with greater percentage of patients with positive RF. The percentage of male was higher in subgroup with highest ACPA: 25% in ACPA-negative group compared to 45% in the strong positive group (group C-3); it correlated with current or ever smoking. DAS28 was high in all groups without significant difference; over 80% of patients had DAS28 higher than 3.2 and 50-60% had a value higher than 5.2. During the 3-year follow-up, 95% of pts received prednisone with an average daily dose of 14.8 mg (SD, 8.9 mg), 50% of pts received more than 15 mg prednisone daily. The average number of synthetic and biological DMARDs was 2.5 (SD 0.73) and 0.56 (SD 0.84) per patient; methotrexate was prescribed in 89% of cases. There were no correlations between negative (group A) or positive ACPA (group B and C) and the variables defined as representing the severity of RA: the percentage of pts with DAS28>3.2 (p=0.136) and DAS28>5.2 (p=0.774). The percentage of pts receiving prednisone dosage higher than 15 mg/day (p=0.828) or at least two synthetic (p=0.846) or biological DMARDs (p=0.668) or their combination (p=0.770) were not significantly different. There was no correlation between ACPA titer and bone erosions (87 pts, p=0.883) during 3 years of follow-up. Finally, there was no correlation between ACPA titers and the number of hospital admissions (p=0.951).

Conclusion: In our cohort of RA pts, higher ACPA titers were observed in males with smoking history. Higher ANCA titers correlated with RF positivity but were not identified as predictive factor for RA severity.

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AB0182 EVALUATION OF THE SOCIO-PROFESSIONAL IMPACT OF ANKYLOSING SPONDYLITIS AND RHEUMATOID ARTHRITIS IN TUNISIA: DATA FROM THE BINAR REGISTRY

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Background: Rheumatoid arthritis (RA) and ankylosing spondylitis (AS) are disabling and common chronic inflammatory rheumatic diseases.