ACROOSTEOLYSIS AND BONE METABOLISM PARAMETERS DISTINGUISH FEMALE PATIENTS WITH LIMITED SYSTEMIC SCLEROSIS WITH AND WITHOUT CALCINOSIS: A CASE CONTROL STUDY

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Background: Calcinosi represents a late manifestation of limited systemic sclerosis (SSc), inducing tissue damage and chronic calcifications. Bone metabolism studies in SSC patients are rare in literature and there are few studies that analyzed clinical, laboratory and bone mineral density (BMD) parameters together.

Objectives: The aim of this study was to compare and analyze clinical aspects and laboratory parameters, including bone metabolism variables in female SSC patients with and without calcinosis, paired by age, disease duration and body mass index (BMI).

Methods: Thirty-six female SSC patients with calcinosis were compared to 36 female SSC patients without calcinosis, matched by age, disease duration and BMI. Organ involvement, autoantibodies, BMD by DXA and laboratory parameters were analyzed. The past and current treatment modalities were also questioned. Statistical significance was considered if p<0.05.

Results: Esophageal hypomotility, digital ulcers, and interstitial lung disease were the most common clinical manifestations of SSC patients, present in similar frequency in both groups. Calcinosi was significantly associated with acroosteolysis (69% vs. 22%, p<0.001), higher modified Rodnan skin score (mRSS: 4.28±4.66 vs 1.17±2.50, p=0.001), higher 25OHD (24.46±8.15 vs. 20.80±6.60ng/ml, p=0.040) and phosphorus (3.81±0.41 vs. 3.43±0.45mg/dl; p<0.001) serum levels. 25OHD levels >30ng/ml were also significantly more frequent in patients with calcinosi (p=0.041).

Discussion: The reduced absolute number of peripheral Treg cells in SSc patients was contributed to the imbalance of Th17/Treg cells and may promote multiple system impairments (P<0.001), however, the number of Th17 cells were significantly increased in SSc patients with simple skin involvement (P = 0.002) (Figure 2). Also the absolute number of peripheral CD4Treg cells in active group with SSc decreased more significantly, thus causing an increase in the ratio of Th17 and Treg cells (Figure 2).

Conclusion: The reduced absolute number of peripheral Treg cells in SSc patients was contributed to the imbalance of Th17/Treg cells and involved in the pathogenesis of SSc, and may promote multiple system impairments and disease activity.

REFERENCES


Figure 1. Absolute number of peripheral Th17 and Treg cells of patients with SSc. (A1 and A2) Neither absolute number nor proportion of Th17 cells was increased. *P<0.05; **P<0.01; ***P<0.001. lcSSc: localized sclerosis, dcSSc: diffuse sclerosis.

Disclosure of Interests: MARILIA Sampaio-BARROS: None declared, LORENA CASTELLO BRANCO: None declared, LIAM TAKAYAMA: None declared, Marco Antonio G Pontes Filho Speakers bureau: Novartis and Janssen, Percival D. Sampaio-Barros: None declared, Rosa M. Pereira: None declared


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ANA was positive in 89% in both groups. Anticentromere antibody was frequent (44% and 31%), while positive anti-Scl70 was rare in both groups. Regarding treatment, current use of corticosteroids was lower in patients with calcinosis compared to patients without calcinosis (8% vs. 28%; p=0.032). Osteoporosis was more frequent in the group with calcinosis (31% vs.17%), although not statistically significant.

Conclusion: This study showed that SSC patients with calcinosis can present a distinct clinic and biochemical profile when compared to a matched group without calcinosis. Presence of calcinosi in female patients with SSC can be associated with acroosteolysis and higher serum levels of 25OHD and phosphorus when compared with patients without calcinosis paired by age, disease duration and BMI.

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Background: Idiopathic inflammatory myopathy are characterized by muscle weakness, caused by inflammation and immune changes in the affected muscles, which lead to a limitation in the execution of day-to-day activities (ADL). The aim of our study was to investigate the impact of specialized and intensive ADL training on muscle strength and endurance, depression and QoL of IIM patients.

Objectives: The study included a total of 50 IIM patients who fulfilled the Bohan and Peter 1975 criteria and had skeletal muscle involvement. 27 patients were recruited into the intervention group (IG) and 23 patients into the control group (CG). Both groups received an educational material for home exercise, but only the IG underwent a 6-month intensive training with a subsequent 6-month follow-up period.

Methods: Patients were assessed by a physician and a physiotherapist blinded to intervention at months 0, 3, 6, and 12. Patients also filled out patient reported outcomes questionnaires and provided blood for routine laboratory analysis and bio-banking. Data analysis was performed between groups and within the group.

Results: Compared to the observed statistically significant deterioration in the CG over the intervention period, we found a statistically significant improvement in the IG in objectively assessed strength and endurance of muscles as well as in subjectively assessed functional abilities and depression (Table). During the follow-up period, there was a significant deterioration or stagnation of the achieved positive results in the IG. Nevertheless, improved functional ability during the intervention period persisted in the IG in the follow-up period as well. Only numerical improvements in the IG during the intervention compared to the numerical deterioration in CG, that did not reach statistical significance, were observed in some subjectively assessed domains of QoL (SF-36) and fatigue (FIS – in physical dimension).

Disclosure of Interests: None declared