Sarcopenia in Rheumatoid Arthritis Female Patients: Relationship between Whole Body and Trabecular Bone Score

Andrea Casabellä, Barbara Rusam, Chiara Serioë, Luigi Molfettaë, Elisa Alessandri, Carmen Pizzorni, Alberto Sulì, Maurizio Cutolo, Sabrina Pascoli*.
Research Laboratory and Academic Division of Rheumatology, Department of Internal Medicine, University of Genova, IRCCS San Martino Polyclinic Hospital, Genova, Italy; Osteoporosis, Bone and Joint Disease Research Center, CROPO, Department of Internal Medicine, University of Genova,Italy, Genova, Italy

Background: Rheumatoid arthritis (RA) is associated with muscle loss, osteoporosis and an increased risk of fractures. Sarcopenia is a syndrome in which muscle mass loss is linked to functional loss. Trabecular Bone Score (TBS), is an index extracted from the dual-energy X-ray absorptiometry (DXA) that provides an indirect measurement of bone axial microarchitecture and allows to get information about bone quality [1-3].

Objectives: The aims of this study were to examine associations between bone mineral density, bone quality, fat mass and lean mass in the whole body in female patients with RA and healthy controls (CNT).

Methods: 55 female patients (mean age 58±12 years) affected by RA and 55 CNT (mean age 52±16 years) were enrolled. Bone Mineral Density (BMD, g/cm²) of the lumbar spine (L1-L4) and whole body expressed by Relative skeletal mass index (RSMI) was analyzed using a DXA scan (GE, Lunar Prodigy). Lumbar spine TBS was derived for each spine DXA examination using the TBS index (TBS iNsight Medimaps). For all subject was calculate the Body Mass Index (BMI, kg/m²). According to the anthropometric equation [4], sarcopenia was defined as RSMI<5.5 kg/m² on women.

Results: The mean BMD±SD compared by RA and CNT was 0.894±0.127 g/cm² vs 1.28±0.672 g/cm² at the lumbar spine and 0.69±0.842 g/cm² vs 1.13±0.998 g/cm² on total hip, respectively, all p<0.001. The mean of BMI and RSMI value in RA patients was lower, 26.1±3.92 kg/m² and 6.92±0.71 kg/m²). Nineteen RA women (35%) presented sarcopenia. Most of RA patients (80%) had bone loss that was significantly lower when compared with control group (p<0.001). Lumbar spine TBS was found significantly lower in RA patients compared with CNT (0.868±0.227 vs 1.482±0.113, p<0.001, respectively). There was not significant correlation between BMI kg/m² and RSMI kg/m² values. There was a positive correlation between the TBS and RSMI values in RA patients (p=0.002).

Conclusion: This study show that sarcopenia is frequent in RA patients, mostly on those classified as normal or overweight according to BMI. Therefore TBS and BMD values, as demonstrated could have a key role in a bone-muscle feedback in chronic systemic inflammatory rheumatic diseases, such as RA.

Disclosure of Interests: None declared


Thrombin Generation Assay and Global Antiphospholipid Score (GAPPS) for Risk Stratification in Antiphospholipid Syndrome

Massimo Radin, Irene Cecchi, Elena Rubini, Silvia Grazietta Foddai, Savino Sciascia, Dario Roccatello. University of Turin, Turin, Italy

Background: Thrombin generation assay (TGA) is a simple and reproducible technique, that could potentially be used in coagulation laboratories, that measures the concentration of generated thrombin after plasma recalcification. The clinical usefulness of TGAs in assessing thrombotic risk has been a matter of growing interest, however, it has not been applied on a large scale to a large cohort of patients with antiphospholipid syndrome (APS).

Objectives: The aim of our study was to assess the potential use of TGA in monitoring the pro-coagulant state in APS patients and its role in predicting the relative risk score in developing APS clinical manifestations, by comparing its parameters to the validated global antiphospholipid score (GAPPS).

Methods: After chart-reviewing all APS patients that presented at San Giovanni Bosco Hospital in the last 5 years, we enrolled 4 groups of patients for the sake of this study, matched for age and sex. Clinical and laboratory characteristics were retrospectively collected. Inclusion criteria were as follows:

Group A) Fulfilled the diagnosis of Thrombotic APS defined as per Sidney criteria [1]: 60.
Group B) Patients with aPL positivity, but with no clinical manifestations of APS defined as per Sidney criteria [1]: 30.
Group C) Patients treated with Warfarin (target INR 2-3), negative for aPL and other autoimmune conditions: 60.
Group D) Healthy Controls: 60.

Results: Figure 1 resumes the representative TGA profiles between groups. Healthy controls and patients with aPL positivity, but no APS clinical manifestations, had similar TGA profiles [mean tLag (min) 9.6 ± 2.9 vs. 8.6 ±3.2; mean tPeak (min) 16.2 ± 4.7 vs. 13.7 ± 5.8; mean Peak (nM) 209.2 ± 103.8 v.s. 265.4 ±106.2; mean AUC (nM) 2023 ±489.2 v.s. 2057.1 ±571.8, respectively].

When analyzing the TGA profile curve of the patient with APS compared with healthy controls and aPL positive patients with no clinical manifestations of APS, we observed a statistically significant higher tLag (13.3 ± 5.9 min; p= 0.003; p= 0.006, respectively) and tPeak (21.3 ± 9.2 min; p= 0.014, respectively) with lower Peak (99.1 ±71.8 nM; p< 0.001; p= 0.005, respectively) and AUC (1150.5 ±837.4 nM; p< 0.001; p= 0.004, respectively).

Furthermore, also when analyzing the TGA profile of APS patients compared to patients treated with warfarin and no APS, APS patients had significant higher tLag (13.3 ±5.9 min v.s. 8.2 ±2.1; p< 0.001), tPeak (21.3 ± 9.2 min v.s 13 ±2.8; p< 0.001), Peak (99.1 ±71.8 nM v.s. 62.3 ±21.5; p= 0.018) and AUC (1150.5 ± 837.4 nM v.s. 655 ±148.8; p< 0.001).

When analyzing a correlation model between GAPPS and TGA parameters, we observed a statistically significant correlation for tLag (Pearson correlation coefficient: r= 0.84, p<0.001).
INCIDENTAL FINDINGS OF TEMPOROMANDIBULAR JOINT DISORDERS ON STANDARD BRAIN MRIS: A CROSS-SECTIONAL STUDY

Tatiana Reibl1, Azaria Simonovich2, Svetlana Kolontaevsky3, Leonid Kalichman4

Background: The temporomandibular joints (TMJ) changes is quite often ignored as a differential diagnosis in the evaluation of patients with suspicion on rheumatic and musculoskeletal diseases as temporal arthritis, fibromyalgia, rheumatoid arthritis. To understand whether TMJ changes have to be included in routine workup of patient’s evaluation with the suspect to rheumatic disease, we assessed the prevalence of TMG changes incidental findings in standard brain MRI scan. In our experience, numerous incidental findings are found on a standard brain MRI scan, especially the elderly. A literature search revealed that no studies have reported the prevalence of these findings and their clinical relevance.

Objectives: To evaluate the prevalence of incidental TMJ findings on standard brain magnetic resonance imaging scans and assess if these findings are associated with symptoms.

Methods: Our sample comprised 65 males (47.1%) and 75 females (52.9%), mean age 54.75±17.45 (range: 18–87). Data collected from each TMJ included articular displacement, articular effusion, condyle flattening, condyle erosions, capsule enhancement, and bone marrow edema. Dichotomous data as to TMJ-related symptoms such as headaches, earaches, dizziness, clicking or grating sound, pain or soreness of the joint, limited mouth opening, locking of the jaw, facial muscle pain, unexplained teeth pain, neck pain or stiffness and difficulty swallowing, were acquired during telephone interviews.

Results: The most frequent finding was disc displacement (39.9% on the right side and 47.8% on the left), followed by condyle flattening (33.3% on the right side and 44.2% on the left). All findings, except bone marrow edema were significantly more frequent on the left side than the right (Table 1). Significant associations were found between incidental findings in the TMJ and earaches (odds ratio 2.759, P=0.043), dizziness (odds ratio 2.325, P=0.031), a clicking or grating sound (odds ratio 6.492, P=0.002) and facial muscle pain (odds ratio 11.255, P=0.003) (Table 2).

Conclusion: Incidental findings of TMJ degenerative features were commonly found on standard brain magnetic resonance imaging. The high frequency of the findings and strong association with facial pain requires performing TMJ assessment in all patients who undergo medical inquiry for suspected rheumatic and musculoskeletal disease.

Disclosure of Interests: None declared


SAT0552 PAEDIATRIC NON-INFECTIONOUS DACRYOADENITIS: THE GOSH EXPERIENCE

Joana Silva-Dinis1, Ameenat Lola Solebo2, Yassir Abou-Rayyah2, Sandrine Compeyrot-Lacassagne1. 1Great Ormond Street Hospital for Children, Rheumatology, London, United Kingdom; 2Great Ormond Street Hospital for Children, Ophthalmology, London, United Kingdom

Background: Dacryoadenitis is an inflammatory enlargement of the lacrimal gland and the most common orbital inflammatory condition in the paediatric population, although only 6 to 17% of orbital inflammatory disorders occur in children (1-4). Dacryoadenitis may be idiopathic or associated with infections or inflammatory diseases. Systematic inflammatory disorders are more typically associated with chronic than acute dacryoadenitis (3).

We describe the largest paediatric cohort of biopsy proven non-infectious dacryoadenitis (4,5).

Objectives:
1. To describe lacrimal gland biopsy results
2. To report associated clinical, laboratory features and treatment

Methods: We identified 72 children who had lacrimal gland biopsy at GOSH between 25/09/2000 and 12/04/2018 using two key-words: ‘lacrimal’ and ‘dacryoadenitis’. We excluded patients with infectious dacryoadenitis, benign tumors or malignancy. We retrospectively reviewed the medical notes, laboratory and histopathology results.

Results: Twenty six patients had non-infectious dacryoadenitis with or without soft tissue involvement. All cases manifested as upper lid swelling. 19 (73.1%) patients had unilateral involvement. 12 (46.2%) patients were male. Mean age at time of biopsy was 10.5 years and median 13 years (range 1 – 17.7).

Four patients had GPA (granulomatous polyangiitis), 4 patients sarcoidosis, 1 patient IgG4-related disease, 1 patient Sjögren with secondary antiphospholipid syndrome and 16 patients non-specific chronic inflammation (NSCI). 2/4 patients with sarcoidosis had extra-ocular involvement. One patient with sarcoidosis had NOD2 mutation without Blau phenotype. One patient with GPA had extra-ocular involvement.

4/13 children tested had raised ACE including 2 sarcoidosis and 2 NSCI. 7/17 had raised amylase (2 sarcoidosis, 1 Sjögren, 4 NSCI). 7/20 had...