WORLD CONGRESS ON OSTEOPOROSIS, OSTEOARTHRITIS AND MUSCULOSKELETAL DISEASES

WCO IOF-ESCEO

2024 LONDON

AbstractBook

April 11-14, 2024

London | United Kingdom
Hilton London Metropole

WORLD'S LEADING CLINICAL CONFERENCE
ON BONE, JOINT AND MUSCLE HEALTH

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be aimed at overcoming self-destructive tendencies, feelings of guilt and resentment, reducing hostility, as well as developing skills for constructive response to aggressive impulses.

P901

SEVERE SARCOPENIA IN A MAN WITH INCOMPLETE SPINAL CORD INJURY

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Different factors may contribute to the loss of muscle strength and mass, leading to sarcopenia.

Case report: We describe a 58-year-old male patient with a history of an accident by falling from a 3-m height in 2020 resulting in dorsolumbar spinal cord injury. The D12-L1 fracture was operated with a posterior metal rahisynthesis. He was admitted to the Medical Rehabilitation Clinical Hospital Baile Felix, Romania for tetraparetic motor deficit. The clinical examination revealed: ASIA C score - L4 motor level. The John Health System Corporation scale established a high risk of falling, with 16 points. Functional Independence Measure scale revealed 63 points out of 126, 50%. Barthel Index for Activities of Daily Living assessing functional independence revealed 50 points out of 100 indicating severe dependence. Functional Ambulation Classification score was 2 indicating ambulation dependent on physical assistance. BMD determination using DXA from 02.09.2023 indicated osteopenia: lumbar spine Z-score: - 1.5; left hip Z-score: -2.0; right hip Z-score: -1.8. ALM value was 0.5 indicating sarcopenia. Jamar hand-held dynamometer used to measure handgrip strength indicated 24 kg for the right hand and 20 kg for the left hand. Medical rehabilitation included daily kinetic program; back toning exercises; limiting weight lifting; toning exercises: weight training three times a week; postural exercises: WKO combined with tilting of the pelvis and extension of the back. Patient's compliance with all measures related to fall prevention is very important.

Conclusion: Although the spinal cord injury was at the dorsolumbar level, the muscle strength and the functionality of the upper limbs were also impaired.

P902

PREDICTION OF LOW BONE MINERAL DENSITY BY CUT-OFF MUSCLE MASS AND STRENGTH VALUES IN ADULTS WITH JUVENILE IDIOPATHIC ARTHRITIS

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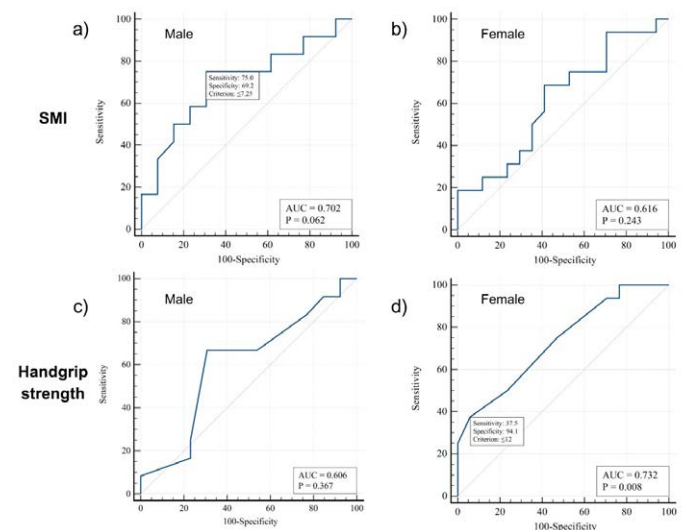
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Objective: To predict low BMD by cut-off muscle mass and strength values in adults with juvenile idiopathic arthritis (JIA).

Methods: This cross-sectional study in a single center, approved by the local research and ethics committees, included 58 young patients who applied to the rheumatology department. Skeletal muscle mass and BMD were determined using DXA. The skeletal muscle mass index (SMI) was defined by appendicular skeletal mass/height^2 (kg/m^2) with such thresholds for men: <7.23 kg/m^2 and women: <5.67 kg/m^2. Handgrip strength (HGS) was assessed using a hand dynamometer (JAMAR) with the following thresholds: <27 kg for men and <16 kg for women. The median value of BMD was determined for males and females to predict the decrease of BMD depending on the low muscle mass and strength. The area under the receiver operating characteristic curve (AUROC) was calculated to determine the ability of HGS and SMI to predict low BMD.

Results: For males, a decrease in BMD was defined as less than the median value (<1.092 g/cm^2), and for females - less than the median value (<1.028 g/cm^2). The connection between the risk of a decrease in BMD and low SMI for males was not found; AUC does not differ from 0.5 but has such a tendency (p=0.062) (Figure 1a). The connection between the risk of BMD reduction and SMI for females was not found; AUC curve does not differ from 0.5 (p=0.243) (Figure 1b). The connection between the low BMD and decreased HGS for males was not found; AUC does not differ from 0.5 (p=0.367) (Figure 1c). The connection between the low BMD depending on HGS for females was found, AUC=0.73 (95%CI 0.56 - 0.90) (p=0.008) (Figure 1d). A decrease in the risk of low BMD for females was found with increasing HGS for each unit, OR=0.67 (95%CI 0.47-0.97).

Conclusion: The connection between low HGS and low BMD was found in female patients with JIA, which can mean the cut-off value of HGS less than 16 kg can be a helpful tool for predicting low BMD.

P903

FACTORS ASSOCIATED WITH SARCOPENIA IN YOUNG ADULTS WITH JUVENILE IDIOPATHIC ARTHRITIS

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Objective: To determine the prevalence of sarcopenia and its associated factors in young adults with juvenile idiopathic arthritis (JIA).

Methods: This cross-sectional study in a single center, approved by the local research and ethics committees, included fifty-eight patients who applied to the rheumatology department. Inclusion criteria: patients with JIA, 18-44 years old. Exclusion criteria: patients with joint replacement, diabetes mellitus, obesity. Sarcopenia was defined as a decrease in muscle mass and strength. Skeletal muscle mass and BMD were determined using DXA. The skeletal muscle mass index (SMI) was defined by appendicular skeletal mass/height^2 (kg/m^2) with such thresholds for men: <7.23 kg/m^2 and for women: <5.67 kg/m^2. Muscle strength was assessed using a hand dynamometer (JAMAR) with the following thresholds: <27 kg for men and <16 kg for women. Anthropometric, clinical, and laboratory data were determined for all patients, including BMI, disease activity by Disease Activity Score (DAS28), Juvenile Arthritis Disease Activity Score (JADAS27), and functional capacity according to the Health Assessment Questionnaire (HAQ).

Results. The mean age of the patients was 24.2±2.3 y. The prevalence of sarcopenia was 35/58 among patients of both sexes, 11/25 among men and 24/33 among women, respectively. The following factors associated with sarcopenia in a univariate logistic regression model were identified: male sex (odds ratio (OR) 0.29, confidence interval (CI) 0.10-0.89; p=0.03), BMI (OR 0.73, CI 0.60-0.89; p=0.002), DAS28 and JADAS27 indices (OR 2.44, CI 1.39-4.27; p=0.002; OR 1.15, CI 1.04-1.27; p=0.007, respectively), HAQ (OR 4.14, CI 1.38-12.5; p=0.01) and femoral neck BMD (OR 0.005, CI 0.0002-0.17; p=0.003).

Conclusion: Sarcopenia was noted in 60% of young patients with JIA. Loss of muscle mass and strength in young patients with JIA is associated with disease activity, BMI, and HAQ.

P904

MODERN TREATMENT OF OSTEOPOROSIS – DENOSUMAB: CASE REPORT

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Case report: Patient JC, 61 years old, noticed a slight flexion of the shoulder and pain in both shoulder joints. He suffers from diabetes, type - a II, on OAD therapy. The menstrual cycle stopped at the age of 45. She had a fracture of her right forearm in January 2020. The level of vitamin D was determined, which was 29.3 nmol/l, calcium level 2.56, phosphorus 1.00, PTH: 99.0, ALP: 56. In June 2020, a diagnosis of osteoporosis was made by osteodensitometry, which shows a significantly reduced bone density in terms of osteoporosis in both the hip and the spine. Prescribed therapy Prolia amp. A 60mg, once in 6 months and vitamin D a 1000 ij, 1 tablet a day. The patient comes for the first control examination after a year, by then she received 2 Prolia ampoules, when we do the DXA examination again, in order to determine the effectiveness of the given therapy. At the first control DXA examination, it was determined that there was still a decrease in bone density both at the level of the spine and at the level of the hip, in terms of osteoporosis, but with an improvement in bone density at the level of the spine by 4.9% and 2.8% at the level of the hip. We continue the current therapy and schedule the next control examination in a year. A second follow-up with a new DXA scan shows improved bone densities at both the spine and hip levels. Bone density at the level of the spine enters the region of osteopenia (T score -2.4), which indicates an improvement in bone density compared to the first examination by 12%. On the hip, the bone density improved by 6.8% compared to the first examination, but the bone density on the hip still remains at the level of osteoporosis (T-score -2.8). Laboratory tests including a calcium level of 2.48 and a significantly improved vitamin D level of 56 nmo/l. The patient felt much better, the pain in her shoulder joints disappeared, she was in a better mood and she herself noticed that she straightened up. We continued the same therapy (Prolia amp and vitamin D), which gave a positive clinical effect, as well as an improvement in bone density on examination with an osteodensitometer. We scheduled a control examination with laboratory analyzes and a new DXA examination in 2 y

Conclusion: In our case, the therapy with Prolia ampoules and denosumab proved to be very effective, because it improved the clinical and psychological condition of our patient, and the examination with an osteodensitometer showed a significant improvement in bone density.