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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.

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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.