THE ROLE OF AGE-RELATED SARCOPENIA IN OSTEOARTHRITIS OF LOWER EXTREMITY

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Background: Sarcopenia, defined as the age-related loss of muscle mass and low muscle function.1 The prevalence of sarcopenia worldwide by meta-analysis of 35 articles was 10% (95% CI: 8%–12%) in men and 10% (95% CI: 8%–13%) in women, respectively.2 A review of the literature on osteoarthritis (OA) and sarcopenia has shown that the age factor that contributes to the development of OA includes a decrease in muscle strength. In people with OA of the lower extremity, the frequency of falls increased by a factor of 2.3 OA contributed to the development of sarcopenia in elderly women.4

Objectives: Perform body composition and muscle analysis in patients with osteoarthritis and identify risk factors for sarcopenia that affect patients with osteoarthritis.

Methods: Prospective study of 159 women, mean age 74±13.3. The walking speed, handgrip strength were evaluated to apply the European Working Group on Sarcopenia. Assessment of appendicular skeletal muscle mass (ALM/h2) and total body fat were assessed using DXA, on Hologic Explorer machines. Covariates were determined by questionnaires and interviews.

Results: 31.45% of people with OA older than 65 years had sarcopenia. Patients with OA had a decrease in muscle strength and function, regardless of sarcopenia. Statistically significantly more frequent in patients with OA were lower indexes of lean mass index (ALM/h2) and body mass index (BMI) (p<0.01). The incidence of sarcopenia increased with age (p<0.01). 61.5% of patients with sarcopenia significantly more often had high values of c-reactive protein (CRP (x 2=31.18, p<0.0001). Patients with sarcopenia were statistically significantly more likely to have vitamin D deficiency than patients without sarcopenia (x 2=8.11, p<0.01). Cases of falls were observed in 90% of patients with sarcopenia (x 2=79.29, p<0.001). Low physical activity 86% of patients with sarcopenia are statistically significantly higher than in patients without sarcopenia (95% CI: 73.3–94.2, p<0.01).

Conclusions: With age, patients with sarcopenia and OA had a significant decrease in muscle mass and physical activity, an increase in the incidence of falls. Patients with sarcopenia had high CRP levels and vitamin D deficiency than patients without sarcopenia.

REFERENCES:

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