



5. SARCOPENIA AND RISK OF FALL IN ELDERLY ADMITTED TO HOSPITAL

Catarina Monteiro¹, Diana Mendes^{2,3}, Marisa Cebola², Elisabete Carolino², Lino Mendes², Miguel Toscano Rico³, António Guerreiro³

¹ Dietetics and Nutrition, Escola Superior de Tecnologia da Saúde de Lisboa (ESTeSL), Instituto Politécnico de Lisboa (IPL), Portugal; ² Dietetics and Nutrition, H&TRC - Health & Technology Research Centre, Escola Superior de Tecnologia da Saúde de Lisboa (ESTeSL), Instituto Politécnico de Lisboa (IPL), Portugal; ³ Centro Hospitalar Universitário de Lisboa Central Hospital de Santa Marta, EPE (CHULC - HSMarta), Portugal; ⁴ Mathematics and Physics, H&TRC - Health & Technology Research Centre, Escola Superior de Tecnologia da Saúde de Lisboa (ESTeSL), Instituto Politécnico de Lisboa (IPL), Portugal.

ABSTRACT

Introduction: Sarcopenia, a progressive and widespread disease of the skeletal muscle, has been a topic of interest. This age-related disease is known to be highly associated with disability, functional decline, frailty and falls. **Aims:** Relating sarcopenia with risk of fall. **Materials and Methods:** Cross-sectional study, developed in Lisbon, in the period from April 22 to July 5, 2019. Elderly people (≥ 70 years) admitted to a hospital institution (up to 72 hours) with the capacity to make their informed consent, without intervention of any element of coercion, with enough knowledge of the aims of the study that allowed free and informed decision making were admitted to the study. Sarcopenia was assessed through the European Working Group on Sarcopenia criteria in Older People 2 (EWGSOP2), which include the evaluation of the grip strength (GS), appendicular skeletal muscle mass (ASMM) predicted by bioelectrical impedance analysis and physical performance (gait speed). The risk of fall was assessed according to the Morse Scale. **Results:** $n=32$ patients, with a mean age of 79.7 ± 5.9 years (70-91). At hospital admission 93.8% ($n=30$) were sarcopenic, 100% ($n=30$) presented low GS, 75% ($n=24$) had low ASMM and 3.1% ($n=1$) had normal gait speed. There was no significant correlation between the Morse Scale and the GS ($r=-0.471$; $p=0,056$) and the ASMM ($r=0,017$; $p=0,948$). There was a significant correlation between the gait speed test and the Morse Scale ($r=-0.689$; $p=0.002$). Patients with gait difficulties are at increased risk of falling. **Discussion/Conclusion:** The sarcopenia and risk of fall assessment is extremely relevant at hospital admission. It demonstrates the need to establish protocols to evaluate the mentioned parameters of the algorithm and to intervene in this population, since the factors that constitute the algorithm proposed by EWGSOP2 tend to worsen during hospitalization.

Keywords: Sarcopenia, Elderly, Risk of falls.