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IS THE MUSCLE POWER OF KNEE EXTENSOR INFLUENCED BY PAIN IN ELDERLY WITH BILATERAL KNEE OSTEOARTHRITS?

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Objective: To evaluate the influence of pain on the muscle power in older women with bilateral knee osteoarthritis (KOA).

Method: A total of 20 women, aged over 65 years (mean 68.6 ± 2.35 years), with a radiographic diagnosis of bilateral KOA grades: I-III according to Kellgren and Laurence classification. The older women were divided into 2 groups: Symptomatic Group (n=10) (SG) and Asymptomatic Group (n = 10) (AG). WOMAC questionnaire was used to assess pain. The muscle power of the knee extensors was assessed by isokinetic evaluation in the angular speed of 60°/s, 5 repetitions, with the Biodex equipment. The evaluations were conducted at LARE (Laboratory of Assessment and Rehabilitation of the Equilibrium), in Ribeirão Preto Medical School (FMRP). Subjects received and signed the free and informed consent form approved by the Ethics Committee of FMRP: 478,727. The normality test Shapiro-Wilk and then the Student's t-test was used with a significance level of $p<0.05$.

Results: The GS presented the average WOMAC scores of 8.8 ± 5.12 and GA presented scores of zero. GS presented the average muscle power of the right and left knee extensors of 34.39W±11.54 and 31.76W±10.53 respectively. And the GA had significantly higher mean values ($p=0.04$ and $p=0.04$) of the muscle power (right knee extensors of 44.2W±7.05 and left about 43.43W ± 9.38).

Conclusion: Based on the results we can conclude that the older symptomatic women showed a decrease of the muscle power of both knee extensors when compared to asymptomatic women, and the presence of pain seems to negatively influence the muscle power, which can lead to functional loss of this elderly population.

Biography

Roberta has completed her Bachelor's in Physical Therapy (2007) from Claretian University Center of Batatais, Batatais, Brazil. Master's in Surgery Brazil (2011 – 2013) from State University of Campinas, Campinas, SP, Brazil. Doctorate in Program of Rehabilitation and Functional Performance (2013-now). Ribeirão Preto Medical School - FMRP- USP, Brazil. Doctorate Sandwich at University of Southern California - Division of Biokinesiology and Physical Therapy, (2015-2016), Los Angeles, CA, United States of America. Presently I have been working at the USP, SP, Brazil, with my doctorate research titled "The effects of laser, exercise and laser + exercise in individuals with knee osteoarthritis: A randomized clinical trial".

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