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THU0615-HPR  FORCE-TIME CURVE ANALYSIS OF HANDGRIP STRENGTH IN PATIENTS WITH FIBROMYALGIA: COMPARISON WITH HEALTHY SUBJECTS

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Background: Factors associated with handgrip strength (HGs), in female with fibromyalgia (FM), use of force-time (FeT) curve to assess peak force, area under the curve (AUC), and variability of the time to reach maximum plateau of the curves (Fig.1) (1) to identify the impact of FM patients versus healthy controls have not been extensively studied.

Figure 1. Force–time (FeT) curve showing the method of calculation of the various force attributes.

Objectives: The aim of the study was to compare the HGs of FM with healthy subjects and to evaluate the relationship between curve characteristics and FM disease severity (2,3).

Methods: One hundred and ten women (mean age 53.8±12.4 years; range 18 to 80) were included and compared with 111, age and BMI matched, female healthy controls. HGs was measured with an electronic device, while demographic and clinical characteristics of the subjects were obtained by the Revised version of the Fibromyalgia impact questionnaire (FIQR) and Fibromyalgia Activity Score (FAS). The patient opinion of their symptoms state (PASS) was evaluated as a complementary tool in the assessment of fibromyalgia severity in women. Arch Phys Med Rehabil. 92, 83-98 (2011).

Results: HGs peak force levels -0.151 0.0249 0.991

Time to reach maximum peak force levels -0.195 0.0415 -0.615

HGs peak force levels 0.823 -0.054 0.5768

WPI peak force levels -0.612 -0.054 0.5768

Time to reach maximum plateau of the curves -0.135

HGs-AUC of the curves 0.0456

HGs peak force levels -0.135 0.0456

HGs-AUC of the curves -0.195 0.0415 -0.615

Table 6. Correlations between HGs curve characteristics and questionnaires studied through the Spearman’s rho correlation coefficients (rho).

References: