E-Poster

EP-978

Comparative Analysis of Morphological Characteristics of Spastic Musculature in Upper and Lower Limbs Using Ultrasound Examination and Time Since Stroke in Post-Stroke Subjects

Topic: Complications/Sequelae (ie Spasticity, Immobilization and Frailty)

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BACKGROUND

To correlate the morphological characteristics of the biceps brachii and medial gastrocnemius muscles using ultrasound examination and the time since stroke in post-stroke subjects.

METHODS

A prospective, multicenter, cross-sectional descriptive study, approved by the Health Service Ethics committee.

Clinical and ultrasound assessment were performed at a non-probabilistic sample of 25 ambulatory adults diagnosed with stroke over than three months, having received some form of rehabilitation during the acute and/or subacute phase, presenting detectable spasticity in the upper and lower limbs as assessed by the Ashworth and Tardieu scales, and agreeing to sign the informed consent form and not having antispastic drug injections within the last six months. A descriptive analysis of social, demographic, and clinical data was collected. Biceps brachialis and medial gastrocnemius were assessed, using both transversal and longitudinal ultrasound axis with a linear B-mode ultrasound transducer. Measurement was also recorded on non-affected side as control. The one-way ANOVA (for MHS) test was used for data comparison.

RESULTS

Average age was 55 (+14.8) years old. Time since stroke was 47.6 months. Chronic stroke (> 12 month) patients were 22/25 (88%) There is no significant difference in the relationship between stroke evolution in time and the Heckmatt scale level measured for each group.

Also, in all cases (affected and unaffected) is that the lowest Heckmatt value always had the least dispersion in time since stroke, and in general, the dispersion of time since stroke tended to increase as the Heckmatt value increased.

CONCLUSION

There is no relationship between morphological characteristics of spastic muscles (assessed by Heckmatt scale) and time since stroke in post-stroke subjects. This implies that muscle changes detected via ultrasound do not follow a predictable progression over time and are likely influenced by factors other than the duration of post-stroke evolution.

Statement of Disclosures

None

Doi: 10.5606/archisprm.2026.EP-978

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