ABSTRAK

Pendahuluan: Stroke merupakan gangguan fungsi saraf yang disebabkan oleh gangguan aliran darah dalam otak yang dapat timbul secara mendadak dengan gejala atau tanda-tanda sesuai dengan daerah yang terganggu. Dampak dari stroke berupa kelemahan dan kelumpuhan yang disebabkan oleh gangguan motorik neuron dengan karakteristik kehilangan kontrol gerakan volunter, gangguan gerakan, keterbatasan tonus otot, dan keterbatasan reflek. Metode terapi kombinasi latihan ROM dan *stretching exercis*e berpeluang memberikan manfaat besar dalam memulihkan kekuatan otot pada pasien stroke. Terapi kombinasi ini dapat merangsang kontraksi pada otot sehingga dapat meningkatkan kekuatan otot dan mengurangi kontraktur pada pasien stroke iskemik.
Tujuan: Untuk mengetahui efektifitas terapi kombinasi *range of motion* (ROM) dan *stretching exercise* terhadap kekuatan dan kontraktur otot pada pasien stroke iskemik.
Metode: Jenis penelitian adalah penelitian eksperimen dengan *pre-test post-test control group design.* Populasi penelitian ini adalah pasien stroke iskemik dengan lama stroke >6 bulan sebanyak 20 responden dan dibagi menjadi kelompok yaitu kelompok intervensi dan kelompok kontrol. Responden kelompok intervensi diberikan terapi kombinasi *range of motion* (ROM) dan *stretching exercise* seminggu tiga kali selama dua minggu dengan durasi 15-20 menit per pertemuan. Instrumen penelitian menggunakan lembar observasi *The Modified Ashworth Scale (MAS)* dan lembar observasi derajat kekuatan otot. Analisis data menggunakan analisis univariat (distribusi frekuensi) dan analisis bivariat (uji *Normalitas*, *Wilcoxon* dan *Mann Whitney*) pada taraf signifikansi p value <0,05.
Hasil: Hasil uji *Wilcoxon* diperoleh nilai *ρ value* 0,05, berarti terdapat pengaruh bermakna kombinasi latihan (ROM) dan *stretching exercise* terhadap kekuatan dan kontraktur otot pada pasien stroke. Hasil uji *Mann Whitney* diperoleh nilai *ρ value* 0,05, berarti terdapat perbedaan bermakna nilai kekuatan dan kontraktur otot antara kelompok intervensi dan kelompok kontrol.
Kesimpulan: Kombinasi (ROM) dan *stretching exercise* dapat meningkatkan kekuatan otot dan mengurangi kontraktur otot pada pasien stroke.

Kata Kunci: *Range of motion* (ROM), *stretching exercise*, kekuatan otot, kontraktur otot, stroke iskemik

ABSTRACT

***Background**: Stroke is a nerve function disorder caused by disruption of blood flow in the brain which can arise suddenly with symptoms or signs according to the affected area. The impact of stroke is in the form of weakness and paralysis caused by motor neuron disorders with the characteristics of loss of voluntary movement control, movement disturbances, limited muscle tone, and reflex limitations. The method of combination therapy for ROM exercises and stretching exercise has the opportunity to provide great benefits in restoring muscle strength in stroke patients. This combination therapy can stimulate muscle contraction so as to increase muscle strength and reduce contractures in ischemic stroke patients.*
***Objective**: To determine the effectiveness of the combination therapy of ROM and stretching exercise on muscle strength and contracture in ischemic stroke patients.*
***Methods**: This research method is experimental research with pre-test post-test control group design. The population of this study were 20 respondents with ischemic stroke with stroke duration> 6 months and divided into groups, namely the intervention group and the control group. Respondents in the intervention group were given combination therapy of range of motion (ROM) and stretching exercise three times a week for two weeks with a duration of 15-20 minutes per meeting. The research instrument used the observation sheet The Modified Ashworth Scale (MAS) and the observation sheet the degree of muscle strength. Data analysis used univariate analysis (frequency distribution) and bivariate analysis (normality test, Wilcoxon and Mann Whitney) at a significance level of p value <0.05.*
***Results**: The Wilcoxon test results obtained a value of ρ value 0.05, which means that there was an effect of a combination of ROM and stretching exercise on muscle strength and contracture in ischemic stroke patients. The results of the Mann Whitney test obtained of ρ value 0.05, which means that there was a significant difference in the value of muscle strength and contracture between the intervention group and the control group.*
***Conclusion**: The combination ROM and stretching exercise can increase muscle strength and decrease muscle contracture in ischemic stroke patients.*

***Keywords**: Range of motion (ROM), stretching exercise muscle strength, muscle contractur, ischemic stroke*