

Korelasi antara kekuatan otot tungkai sisi paresis dengan kemampuan berjalan pada pasien stroke kronik = Correlation between lower limb muscles strength on paretic side and walking ability in chronic stroke patients

Rita Haryanti, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20417158&lokasi=lokal>

Abstrak

[ABSTRAK

LATAR BELAKANG. Kelemahan otot yang terjadi pada 75% - 80% pasien stroke menyebabkan terbatasnya aktivitas pasien stroke. Cara pengukuran kekuatan otot yang mudah digunakan di klinis adalah dengan hand-held dynamometer, sedangkan untuk mengukur kemampuan berjalan yang cukup efektif pada pasien stroke adalah uji jalan 2 menit. Telah banyak penelitian yang mendapatkan adanya hubungan antara kekuatan otot sisi paresis dengan kemampuan berjalan pada pasien stroke, namun belum ada yang menghubungkan antara kekuatan otot tersebut dengan uji jalan 2 menit. Tujuan penelitian ini untuk mengetahui korelasi antara kekuatan otot sisi paresis dengan kemampuan berjalan pada pasien stroke kronik yang diukur dengan uji jalan 2 menit dan mengetahui kelompok otot yang paling berpengaruh terhadap kemampuan berjalan tersebut.

METODE. Pada 28 subyek penelitian yang memenuhi kriteria dan bersedia mengikuti penelitian dilakukan pengukuran kekuatan otot tungkai sisi paresis, yaitu otot ekstensor panggul, fleksor panggul, ekstensor lutut, fleksor lutut, dorsifleksor pergelangan kaki, plantarfleksor pergelangan kaki, dengan hand-held dynamometer, kemudian dilakukan uji jalan 2 menit. Data demografis dan klinis pasien dikumpulkan dan dicatat.

HASIL. Diperoleh korelasi positif yang bermakna antara kekuatan otot tungkai sisi paresis yaitu otot ekstensor panggul, fleksor panggul, ekstensor lutut, fleksor lutut, dorsifleksor pergelangan kaki, dan plantarfleksor pergelangan kaki dengan jarak tempuh berjalan yang diuji dengan uji jalan 2 menit ($r = 0,410$ hingga $r = 0,645$). Diperoleh korelasi positif yang bermakna antara kekuatan otot tungkai sisi paresis yaitu otot ekstensor panggul, fleksor panggul, ekstensor lutut, fleksor lutut, dorsifleksor pergelangan kaki, dan plantarfleksor pergelangan kaki dengan kecepatan berjalan yang diuji dengan uji jalan 2 menit ($r = 0,409$ hingga $r = 0,641$). Otot yang paling berpengaruh terhadap kemampuan berjalan pada pasien stroke kronik dengan nilai r tertinggi dan p terendah adalah otot plantarfleksor pergelangan kaki, diikuti dorsifleksor pergelangan kaki, fleksor panggul, fleksor lutut, ekstensor lutut, dan terakhir ekstensor panggul.

KESIMPULAN. Terdapat korelasi positif antara kekuatan otot tungkai sisi paresis dengan kemampuan berjalan pada pasien stroke kronik, dengan otot yang paling berpengaruh terhadap kemampuan berjalan yaitu otot plantarfleksor pergelangan kaki.

<hr>

ABSTRACT

BACKGROUND. Muscle weakness that occurs in 75% - 80% of stroke patients causing limited activity of stroke patients. The easy way to measure muscle strength in clinical is by using a hand-held dynamometer, whereas the effective way to measure the ability to walk in stroke patients is using a 2-minute walk test. Previous studies said that there was relationship between muscle strength in paretic side with walking ability

in stroke patients, but there is still no study about correlation between the muscle strength with a 2 minute walk test. The purpose of this study to determine the correlation between muscle strength of the lower extremity of the paretic side with walking ability in patients with chronic stroke using 2 minutes walk test, and determine which muscle groups that has the best correlation with the ability of walking.

METHOD. There were 28 subjects who were eligible and willing to participate in the research. They got measurements of lower extremity muscle strength of the paretic side (hip extensor muscles, hip flexors, knee extensors, knee flexors, ankle dorsiflexor, ankle plantarflexor) using hand-held dynamometer, then 2 minutes walk test. Patient demographic and clinical data were collected and recorded.

THE RESULTS. There are significant positive correlation between the strength of the lower extremity muscles of the paretic side (hip extensor, hip flexors, knee extensors, knee flexors, ankle dorsiflexor, and ankle plantarflexor muscles) with the length of 2-minute walk test ($r = 0.410$ - $r = 0.645$). There are significant positive correlation between the strength of the lower extremity muscles of the paretic side (hip extensor, hip flexors, knee extensors, knee flexors, ankle dorsiflexor, and ankle plantarflexor muscles) with walking speed of the 2-minute walk test ($r = 0.409$ - $r = 0,641$). The muscles with the best correlation with the ability of walking in patients with chronic stroke are the muscles with the highest r and the lowest p , plantarflexor ankle muscles, followed by dorsiflexor ankle muscles, hip flexors muscles, knee flexors muscles, knee extensor muscles, and hip extensor muscles.

CONCLUSION. There are positive correlation between the strength of the lower extremity muscles of the paretic side with walking ability in patients with chronic stroke, and the muscles with the best correlation with the ability of walking are plantarflexor ankle muscles. ;**BACKGROUND.** Muscle weakness that occurs in 75% - 80% of stroke patients causing limited activity of stroke patients. The easy way to measure muscle strength in clinical is by using a hand-held dynamometer, whereas the effective way to measure the ability to walk in stroke patients is using a 2-minute walk test. Previous studies said that there was relationship between muscle strength in paretic side with walking ability in stroke patients, but there is still no study about correlation between the muscle strength with a 2 minute walk test. The purpose of this study to determine the correlation between muscle strength of the lower extremity of the paretic side with walking ability in patients with chronic stroke using 2 minutes walk test, and determine which muscle groups that has the best correlation with the ability of walking.

METHOD. There were 28 subjects who were eligible and willing to participate in the research. They got measurements of lower extremity muscle strength of the paretic side (hip extensor muscles, hip flexors, knee extensors, knee flexors, ankle dorsiflexor, ankle plantarflexor) using hand-held dynamometer, then 2 minutes walk test. Patient demographic and clinical data were collected and recorded.

THE RESULTS. There are significant positive correlation between the strength of the lower extremity muscles of the paretic side (hip extensor, hip flexors, knee extensors, knee flexors, ankle dorsiflexor, and ankle plantarflexor muscles) with the length of 2-minute walk test ($r = 0.410$ - $r = 0.645$). There are significant positive correlation between the strength of the lower extremity muscles of the paretic side (hip extensor, hip flexors, knee extensors, knee flexors, ankle dorsiflexor, and ankle plantarflexor muscles) with walking speed of the 2-minute walk test ($r = 0.409$ - $r = 0,641$). The muscles with the best correlation with the ability of walking in patients with chronic stroke are the muscles with the highest r and the lowest p , plantarflexor ankle muscles, followed by dorsiflexor ankle muscles, hip flexors muscles, knee flexors

muscles, knee extensor muscles, and hip extensor muscles.

CONCLUSION. There are positive correlation between the strength of the lower extremity muscles of the paretic side with walking ability in patients with chronic stroke, and the muscles with the best correlation with the ability of walking are plantarflexor ankle muscles. , **BACKGROUND.** Muscle weakness that occurs in 75% - 80% of stroke patients causing limited activity of stroke patients. The easy way to measure muscle strength in clinical is by using a hand-held dynamometer, whereas the effective way to measure the ability to walk in stroke patients is using a 2-minute walk test. Previous studies said that there was relationship between muscle strength in paretic side with walking ability in stroke patients, but there is still no study about correlation between the muscle strength with a 2 minute walk test. The purpose of this study to determine the correlation between muscle strength of the lower extremity of the paretic side with walking ability in patients with chronic stroke using 2 minutes walk test, and determine which muscle groups that has the best correlation with the ability of walking.

METHOD. There were 28 subjects who were eligible and willing to participate in the research. They got measurements of lower extremity muscle strength of the paretic side (hip extensor muscles, hip flexors, knee extensors, knee flexors, ankle dorsiflexor, ankle plantarflexor) using hand-held dynamometer, then 2 minutes walk test. Patient demographic and clinical data were collected and recorded.

THE RESULTS. There are significant positive correlation between the strength of the lower extremity muscles of the paretic side (hip extensor, hip flexors, knee extensors, knee flexors, ankle dorsiflexor, and ankle plantarflexor muscles) with the length of 2-minute walk test ($r = 0.410$ - $r = 0.645$). There are significant positive correlation between the strength of the lower extremity muscles of the paretic side (hip extensor, hip flexors, knee extensors, knee flexors, ankle dorsiflexor, and ankle plantarflexor muscles) with walking speed of the 2-minute walk test ($r = 0.409$ - $r = 0,641$). The muscles with the best correlation with the ability of walking in patients with chronic stroke are the muscles with the highest r and the lowest p , plantarflexor ankle muscles, followed by dorsiflexor ankle muscles, hip flexors muscles, knee flexors muscles, knee extensor muscles, and hip extensor muscles.

CONCLUSION. There are positive correlation between the strength of the lower extremity muscles of the paretic side with walking ability in patients with chronic stroke, and the muscles with the best correlation with the ability of walking are plantarflexor ankle muscles.]