

ABSTRAK

PENGARUH *BUERGER ALLEN EXERCISE* TERHADAP *ANKLE BRACHIAL INDEX* DAN KADAR GULA DARAH SEWAKTU PADA PENDERITA DIABETES MELITUS TIPE 2 DI PUSKESMAS WILAYAH KECAMATAN NGANJUK

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Latar belakang: *Buerger Allen Exercise* mampu meningkatkan pemakaian glukosa oleh otot yang aktif sehingga glukosa dalam darah dapat menurun, dapat membantu mencegah terjadinya penyakit arteri perifer, serta meningkatkan aliran darah ke arteri dan berefek positif pada metabolisme glukosa. Penelitian ini bertujuan untuk mengetahui pengaruh *Buerger Allen exercise* terhadap *ankle brachial index* dan kadar gula darah sewaktu pada penderita diabetes melitus tipe 2.

Metode: Jenis penelitian ini adalah *quasy-experiment* dengan *pre-post test design with control group*. Jumlah sampel 60 penderita diabetes melitus dengan *purposive sampling*, dibagi menjadi 2 kelompok yaitu kelompok perlakuan dan kelompok kontrol. Responden kelompok perlakuan diberikan intervensi *Buerger Allen exercise* sebanyak 12 kali selama 15 hari, penelitian dilakukan di wilayah Puskesmas Kecamatan Nganjuk. Data hasil pengukuran nilai *ankle brachial index* dan nilai kadar gula darah sewaktu berupa rasio. Diuji statistik dengan *Paired Samples Test*.

Hasil: Berdasarkan uji statistik didapatkan *p value ankle brachial index* 0.001 dan *p value* kadar gula darah sewaktu 0.001 (*p value* < 0.05). Hal ini menunjukkan adanya perubahan bermakna secara statistik nilai *ankle brachial index* dan kadar gula darah sewaktu sesudah intervensi pada kelompok perlakuan.

Kesimpulan: *Buerger Allen exercise* mampu meningkatkan nilai *ankle brachial index* dan menurunkan kadar gula darah sewaktu pada penderita diabetes melitus tipe 2.

Kata Kunci : Diabetes melitus tipe 2, *Buerger Allen Exercise*, *Ankle brachial index*, Gula darah sewaktu

ABSTRACT

THE EFFECT OF BUERGER ALLEN EXERCISE TO ANKLE BRACHIAL INDEX AND BLOOD GLUCOSE LEVELS IN PATIENTS WITH TYPE 2 DIABETES MELLITUS AT PUSKESMAS WILAYAH KECAMATAN NGANJUK

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Background: *Buerger Allen Exercise can increase glucose consumption by active muscle so that glucose in the blood can decrease, can prevent the occurrence of peripheral artery disease, and increase blood flow to artery and have positive effect on glucose metabolism. This study aimed to determine the effect of Buerger Allen exercise on the ankle brachial index and blood glucose levels in patients with type 2 diabetes mellitus.*

Method: *This study was a quasy-experiment with pre-post test design with control group. The sample of 60 patients with diabetes mellitus with purposive sampling, divided into 2 groups namely the treatment group and the control group. The respondents of the treatment group were given Buerger Allen exercise intervention 12 times for 15 days, the research was conducted in Puskesmas wilayah Kecamatan Nganjuk. Data result of measurement of ankle brachial index value and blood glucose value in the form of ratio. Tested statistic with Paired Samples Test*

Results: *Based on the statistical test obtained p value of ankle brachial index 0.001 and p value of blood glucose levels 0.001 (p value <0.05). This indicates a statistically significant change in the value of ankle brachial index and the blood glucose levels after intervention in the treatment group.*

Conclusion: *Buerger Allen exercise can increase the value of ankle brachial index and reduce levels of blood glucose levels in people with type 2 diabetes mellitus.*

Keywords: *Type 2 diabetes mellitus, Buerger Allen Exercise, Ankle brachial index, Blood glucose levels*