Pengembangan Algoritme Neuromuscular Taping Terhadap Perbaikan Klinis Gangguan Mikrosirkulasi Pada Kaki Diabetik = Development of Neuromuscular Taping Algorithm Against Clinical Improvement of Microcirculation Disorders in Diabetic Foot

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Abstrak

Disertasi ini membahas algoritme neuromuscular taping terhadap manifestasi klinis gangguan mikrosirkulasi pada kaki dabetik. Tahapan riset meliputi kajian literatur, faktor risiko neuropati kaki diabetik, uji diagnostik, standarisasi perawatan pencegahan neuropati kaki diabetik, standarisasi NMT FANI pada perawatan neuropati kaki diabetik dan pembentukan algoritme. Desain penelitian uji diagnostik dengan cross sectional, sedangkan uji efek NMT FANI terhadap kelembapan, suhu, kapiler lipatan kuku dan nyeri neuropati dengan desain eksperimental. Instrument menggunakan moisture meter skin, thermometer infrared, capiloroscopy, biothesiometer dan LANSS. Hasil uji diagnostik menunjukan moisture meter skin (sensitifitas, spesifisitas dan akurasi 74%); capilaroscopy (sensitifitas, spesifisitas dan akurasi 73%) baik dalam mendeteksi neuropati kaki diabetik. Uji thermograph menunjukan sensitifitas 73.07% dalam mendeteksi kelainan neuropati, spesifisitas 56.42% dan akurasi 59.03%. Uji thermometer gun menunjukan sensitifitas 56.66%, spesifisitas 53.67% dan akurasi 54.21% kurang baik dalam mendeteksi neuropati kaki diabetik. NMT FANI berpengaruh secara signifikan terhadap kelembapan kulit, kapiler lipatan kulit kuku dan derajat nyeri neuropati pada kaki diabetik (p value < 0.05), sedangkan pada suhu kaki tidak berpengaruh secara signifikan (p value > 0.05). Hasil akhir algoritme tersusun dari pengkajian awal dari hasil anamnesis faktor risiko, pemeriksaan fisik dan diagnostik serta tatalaksana NMT FANI. Indikator kelembapan kulit, perubahan struktur kapiler lipatan kuku kaki dan intervensi NMT FANI perlu dimasukan dalam tatalaksana kaki diabetik.

.....This dissertation discusses the neuromuscular taping algorithm against the clinical manifestations of microcirculation disorders in the diabetic foot. The research stages included a review of literature, risk factors for neuropathy of diabetic foot, diagnostic tests, standardization of preventive treatment of diabetic foot neuropathy, standardization of NMT FANI in the treatment of diabetic foot neuropathy, and algorithm formation. The study design was a cross-sectional diagnostic test, while an experimental design was employed for the NMT FANI effect test on skin moisture, temperature, nail fold capillaries, and neuropathic pain. The instruments used were a skin moisture meter, infrared thermometer, capillaroscopy, biothesiometer, and LANSS. The diagnostic test results showed that the SC skin moisture meter (sensitivity, specificity, accuracy 74%) and capillaroscopy (sensitivity, specificity, accuracy 73%) were good at detecting diabetic foot neuropathy. The thermograph test shows a sensitivity of 73.07% in detecting neuropathic disorders, a specificity of 56.42% and an accuracy of 59.03%. The thermometer gun test showed a sensitivity of 56.66%, a specificity of 53.67%, and an accuracy of 54.21% that was not good at detecting diabetic foot neuropathy. NMT FANI had a significant effect on skin moisture, nail fold capillaries, and the degree of neuropathy pain in diabetic foot (p value < 0.05), while foot temperature did not significantly influence (p value > 0.05). The end result of the algorithm is composed of a preliminary assessment of the results of the history of risk factors, physical examination, diagnostic and management of NMT FANI.

Indicators of skin moisture, changes in the capillary structure of the nail folds and NMT FANI interventions need to be included in the management of diabetic foot.